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THIS WEEK'S NEWS

THAT LICENSING OFFICERS of the Ministry of Works are prepared to look favourably on applications from the London region for licences for maintenance work, including stonework, is a view expressed by the Director of the L.M.B.A. *p.* 319

HOUSING AUTHORITIES are being urged by the Ministry of Housing and Local Government to grant licences for private houses wherever such homes can be built without prejudice to other essential services. Details are given on *p.* 333

MR. HAROLD MACMILLAN, Minister of Housing and Local Government, has given general consent to all local authorities in England and Wales to sell any of their council houses subject to certain conditions. A summary of the circular which has been issued on this subject appears on *p.* 334

THE RECOMMENDATIONS contained in Steel Economy Bulletin No. 1 issued by the Ministry of Works are intended to secure the maximum efficiency from steel used in the design of buildings. They are to be found on *p.* 335

A MINISTRY OF HOUSING Circular, inviting local authorities to make sure that sites for the next three years' house-building programme are agreed upon in good time, also asks authorities to take into account the need for sites of private developers. It is suggested that where there is difficulty they should consider acquiring land to make plots available. *p.* 340

A COUNTY COURT DECISION that a contractor subject to the "fair wages clause" is not liable to a workman employed by a sub-contractor in respect of the latter's breach of his contract is reported. The judge held that while the terms of the Housing Act, 1936, were perfectly plain, i.e., that it should be the duty of the local authority to secure the insertion in all contracts of a "fair wages clause," there was nothing in the Act directly placing any obligation on the contractors. *p.* 343

CONTROL OF DESIGN

THERE is little difference of opinion as to the need for some form of control of external design in buildings, in spite of the difficulty and delicacy of the problem.

Without such control large tracts of the countryside in the past have been swallowed up by developments of gross tastelessness and monotony, and many of our pleasant townships have been solidly encased with a crust of ugliness. It is for that reason that men whose opinions may vary widely in architectural matters yet join forces in a determination to stop the rot, for they share a common desire for greater order and seemliness.

Subjects of taste, however, create an explosive mixture, and from time to time there is a detonation which tends to weaken the effort. Taste is a deep-seated and personal matter, whether it assumes the form of a religious creed, or whether it gathers a less worthy strength from the prejudices of long established habits of thought and associations of ideas. We all find it difficult to tolerate taste which is not our own, and argument cannot convince where the heart remains obdurate.

The case at Maidstone, which was reported in our issue of August 29, was one where there has been a clash of taste between an architect and his client on the one hand and the local authority and the landowner on the other, and it is of considerable interest to all who believe in Town Planning, including powers of control in design. We then illustrated the design from a model as a commentary upon the report. It would be unwise and indeed improper to pass judgment while the matter is *sub judice*, and in any case no fair weighing of its merits could be made without full knowledge of the siting and neighbourhood. It is fairly certain, however, that average lay opinion would express dislike of the design, if for no other reason than its unfamiliarity, but it would be equally certain that in architectural circles there would be a wide difference of opinion. To some, the design would be stimulating and exciting; to others it would be profoundly dull. Some would consider it a sincere attempt to advance the art of building; others would suspect it to be little more than a stunt. Thus we run up against the complexity of this problem of controlling taste by law, and we find ourselves convinced of the need for certain action which, on the face of it, appears impossible to establish. Only the knowledge that things cannot be both essential and impossible leads us to pursue the matter further.

The Town Planning Act was never intended to establish a dictatorship of taste, and its essence is a liberal administration. Its task is mainly to ensure that citizens who build shall not be a nuisance to their neighbours. It implies a certain respect for social custom and habit in so far as these customs and habits are not themselves vitiated by prejudice or insecurely founded. There is a certain decency in these matters as in all social intercourse; the city man on the beach is quite properly dressed if he is wearing bathing trunks, but he is acting outrageously if he appears thus in the City; the urban terrace house is decently a part of a dignified entity, but sliced up and dumped among the thatched cottages of a village, the same unit could be an unforgivable offence, however majestic the proportions of its window openings. These are cases where the layman would be in no doubt, and where his opinion would need little expert support, and it is salutary for those of us who claim to know something about architecture to recognise that there is such a thing as a public taste in building, and that within certain fairly narrow limits it is a taste beneficial to the harmony of the landscape.

That is not to say that we are to be at its complete mercy, for lay prejudices would soon put an end to all progress. Rather would we appeal for a maximum of restraint and patience among architects themselves, however eager they may be to move swiftly ahead; for architectural development

has always been a slow and imperceptible process which a swift turning of the pages of history does not always reveal. Not for one moment, however, would we relax in our conviction that those who presume to judge must either be trained in their job, or must be backed by trained advice, and it is in that direction that we feel in order in making adverse comment upon the Maidstone case. There it would appear that the only expert witness for the local authority was the Building Inspector, who may have been a man of taste in his private capacity, but who apparently held no official qualification other than under the Public Health Acts. We regard this as an entirely wrong approach to an inquiry of this nature. The Inspector is there in a *quasi*-judicial capacity, and the proceedings approach the status of a Court of Law. In such places a case must be judged solely upon evidence, and it would appear in this instance that the Building Inspector was placed in a most unequal position, and that the case for the authority must have been prejudiced by that fact. This is against the public interest, because it would seem to mean that if the authority was right in its contentions, its case could be won only through the personal opinions of the Inspector, and not upon the evidence submitted.

We would urge most strongly upon local authorities that, in their administration of those sections of the Act covering control of design, they should equip themselves with the skilled backing necessary to give weight to their decisions and to prevent bad decisions. This may be through qualified officials, but more usefully by the panel system which the architectural profession so cheerfully supports. If this case does no more than emphasise this side of the question it will not have been brought in vain.

STEEL ECONOMY BULLETINS

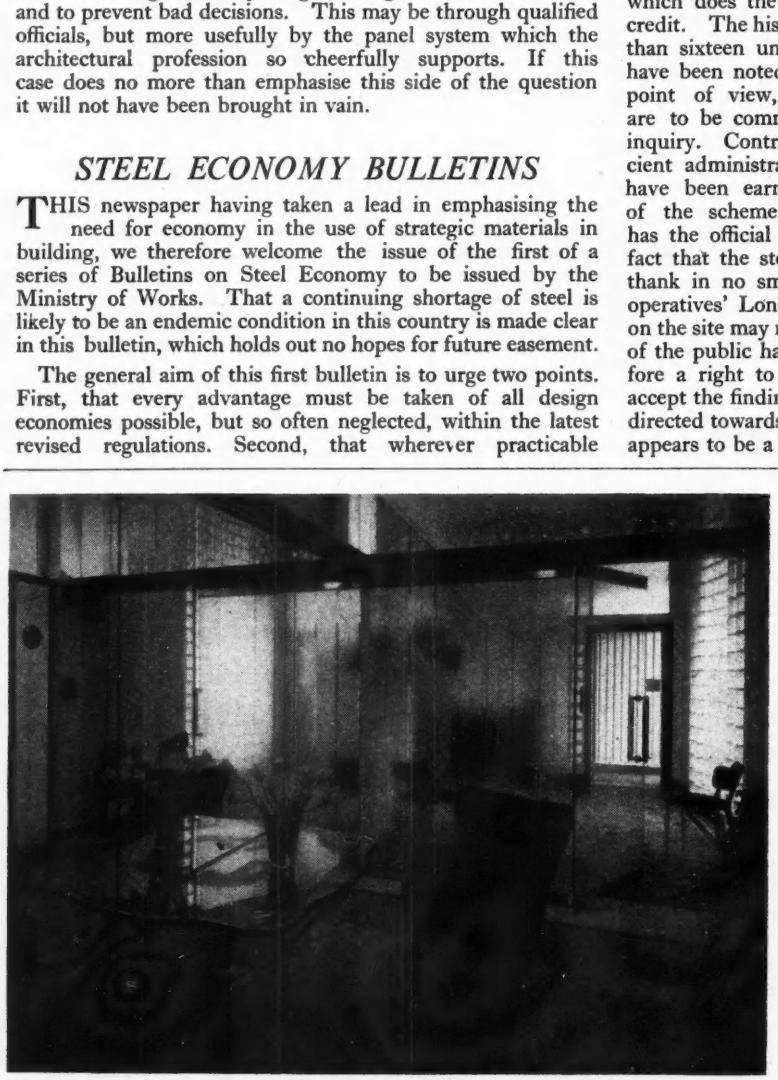
THIS newspaper having taken a lead in emphasising the need for economy in the use of strategic materials in building, we therefore welcome the issue of the first of a series of Bulletins on Steel Economy to be issued by the Ministry of Works. That a continuing shortage of steel is likely to be an endemic condition in this country is made clear in this bulletin, which holds out no hopes for future easement.

The general aim of this first bulletin is to urge two points. First, that every advantage must be taken of all design economies possible, but so often neglected, within the latest revised regulations. Second, that wherever practicable substitutes for steel should be used. In this latter context it is somewhat strange to find that alloys and timber receive no mention. Can it be that we are to receive similar warning to economise in these materials also, or is it merely that, to the orthodox structural engineer, these materials are not considered of sufficient importance to merit attention?

These bulletins are not to be read casually and put on one side, for they carry a sting: the Ministry "will examine licence applications in the light of these recommendations and will normally require a certificate from the architect or engineer that the recommendations have been fully taken into account." If this means in practice, as it clearly should mean, that the issue of licences may depend to some extent on the skill of the designer, it is a most welcome shift of licensing policy. Such a policy will require a good deal of courage on the part of the Ministry, not least in restraining those prodigal users whose only need is to apply for a bulk licence to cover their whole programme.

BOREHAM WOOD

THE action of the London County Council to rescind their decision to close down the work at their Boreham Wood housing scheme is a satisfactory outcome of a dispute which does the rank and file of operatives on the site little credit. The history of this building operation, where no fewer than sixteen unofficial stoppages or "go slow" campaigns have been noted in the last 30 months has, from the public point of view, been an unhappy one, and the Council are to be commended on their decision to hold an official inquiry. Contrary to reports that there has been inefficient administration, the fact is that high bonus payments have been earned by the men throughout the progress of the scheme, and that at no time until the present has the official disputes machinery been invoked. For the fact that the stoppage has now been avoided the men may thank in no small part the work of Mr. E. L. Jones, the operatives' London Secretary, and we hope that the leeway on the site may now be made up. In this dispute the interests of the public have been disregarded; the public have therefore a right to expect that masters and men shall loyally accept the findings of the forthcoming inquiry where such are directed towards preventing a recurrence of what *prima facie* appears to be a shameful chapter in building trade history.



A GLASS SHOWROOM

This showroom was recently completed at India Buildings, Liverpool, for Pilkington Brothers, Ltd. It was designed by the firm's staff architect, Mr. Sven Sternfeldt, L.R.I.B.A. The showroom itself is screened from the entrance vestibule by a panel of ½ in. toughened glass having various acid treatments on it, and the door is of "Armourplate." The tabletop, against the mirror-faced wall on the left, is an inch thick and is supported by two ½ in. thick bent toughened glass fins built into a hardwood base. The underside of the top has been silvered and large areas brushed out leaving amorphous silvered shapes enhancing the illusion of a complete table. Deep punties are brilliant-cut into the corners of the tabletop for use as ashtrays.

NOTES & NEWS

ENCOURAGEMENT FOR HOME OWNERS

THE past ten days have seen the appearance of an unusually heavy crop of Ministry of Housing and Local Government circulars, but insofar as all but one are directed towards increasing the numbers of new houses, they are welcome. Particular interest attaches to Circular 70/52 in which the Minister urges upon housing authorities the importance of granting licences for private houses wherever local conditions permit; the advice that the number of such licences issued will not affect the programmes of the authorities themselves and that, as a result, residence in the area in which it is desired to build will not be regarded as an essential qualification for a licence, is a reassurance which, if accepted by housing authorities, should do much to encourage the private individual to provide his own home.

The general consent given by the Minister to all local authorities to sell any of their council houses subject to certain conditions is another step calculated to restore independence to the individual and to remove some of the weight of subsidy from the nation. A third circular exhorts local authorities to make sure that sites for the next three years' house-building programme are agreed upon in good time. All this is refreshing news for those returning from holiday.

MORE LONDON LICENCES?

NEWS coming from the London Master Builders' Association to the effect that the Ministry of Works' licensing offices in the London area have instructions "to look as favourably as possible upon applications for licensing of maintenance work," and particularly so where stonework is involved, will be received with interest by architects and builders.

A definite indication such as referred to should do much to encourage building owners to undertake necessary repair and maintenance work, and many architects will no doubt wish to consult with the Licensing Officers upon the prospects of obtaining a licence. The emphasis on stonework is highly satisfactory, for the stonemasonry industry had built up the number of apprentices in the expectation (in London so far disappointed) that there would be an increased volume of work. Prospects therefore seem brighter.

REGISTRATION OF SURVEYORS

MAJOR E. H. PALMER, O.B.E., secretary of the Valuers, Surveyors and Estate Agents' Association, has issued the following statement:—

"A Joint Registration Committee has been formed to give consideration to proposals for the Registration of the Profession with particular regard to the need for ensuring the protection of the public.

"The Committee comprises representatives from the Architectural and Building Surveyors' Society, the Institute of Quantity Surveyors, the Valuers' Institution, the Faculty of Surveyors of England and the Valuers, Surveyors and Estate Agents' Association.

"Major Victor Lucas, F.F.S.(Eng.), F.V.A., F.R.S.A., has been elected Chairman and the address of the Committee is 98, Gloucester-place, W.1."

It is understood that the word "profession" used above connotes all those callings represented in the titles of the five bodies named.

F.L.W. AND THE STUDENTS

YALE ARCHITECTURE STUDENTS—who have just produced the first issue of a magazine, "Perspecta"—have made a good start by crossing swords with Frank Lloyd Wright. They have illustrated his Unitarian Church in Madison, Wisconsin, but have been unable to agree that the architect's choice of photographs is the best; those finally used do not command their full approval. Here they will have the support of many of their professional colleagues who find that choices of viewpoints on occasion can vary. "Perspecta" has its origin in the students' view that no truly "want guide" publication exists in the United States; so they argue and they may well be right. We wish them every success in their venture which, in so far as we gather that the first issue "covers a broad list of subjects, from Michelangelo to Frank Lloyd Wright, from the new Lever Building to designs for a portable dwelling in case of atomic bombing," is certainly catholic in its outlook.

STUDENTS' DESIGN EXHIBITION

THE EXHIBITION recently given by students of the Royal College of Art is now reproduced, almost in its entirety, at Liberty of Regent-street until September 20. Arranged by the students themselves, the exhibition will be shown in the Antique Gallery on the fourth floor of Liberty, and the setting will be done by the Department of Interior Design, which is under the direction of Sir Hugh Casson.

CONTRACTS AND CONFERENCES

THE DIRECTOR of the London Master Builders' Association informs us, in connection with a leading article last week, that the L.M.B.A. was not invited to appoint a representative to the *ad hoc* committee which has been considering the London Builders' Conference, nor has it in fact appointed one; the matter is being handled entirely by the National Federation.

COMING EVENTS

TUESDAY, SEPTEMBER 9

FEDERATION OF MASTER BUILDERS GOLFING SOCIETY.—Autumn meeting. Sunningdale Golf Club.

WEDNESDAY, SEPTEMBER 10

L.M.B.A. (CENTRAL AREA NO. 1).—Luncheon followed by film show. Derry and Tom's Restaurant, Kensington High-street, W.8. 1 p.m.

HOME LIFE EXHIBITION.—Opening of 21st exhibition. Granby Hall, Leicester. Daily 2 p.m.—10 p.m. Continuing until September 20.

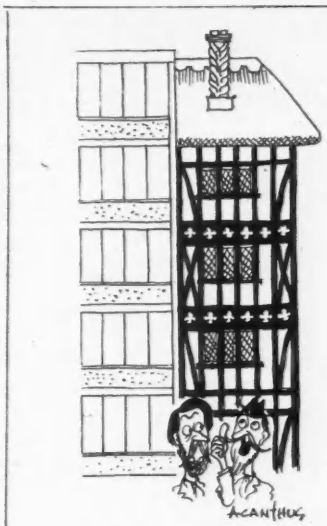
THURSDAY, SEPTEMBER 11

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN. 97th Annual Exhibition, 16, Princes-gate, S.W.7. 10 a.m. to 8 p.m. (Saturdays, 10 a.m. to 5.30 p.m.; Sundays, 2.30 p.m. to 5.30 p.m.). Open until October 12.

FRIDAY, SEPTEMBER 12

L.M.B.A. GOLFING SOCIETY.— L.M.B.A. *v* R.I.C.S. Wentworth Golf Club.

MANSARD GALLERY. — Opening of exhibition of "Craftwork from East Anglia." 2.30 p.m. Continuing open until October 11. Heal & Son, 196, Tottenham Court-road, W.1.



"With all this talk about Steel Economy, I've had to compromise somewhat with my architectural integrity!"

CHIEF ARCHITECT, SCOTLAND

THE Secretary of State for Scotland has appointed Mr. T. A. Jeffryes, A.R.I.B.A., M.T.P.I., to the post of Chief Architect and Chief Planning Officer in the Department of Health for Scotland in succession to Mr. R. J. Gardner-Medwin, who shortly proceeds to Liverpool University to occupy the Chair of Architecture.

PROFESSIONAL ANNOUNCEMENTS

MESSRS. HUGH MINTY AND PARTNERS (Mr. R. J. H. Minty, F.R.I.B.A.), have removed to 24, Welbeck-way, London, W.1. (Tel.: Welbeck 3516–6.)

MR. LEONARD MANASSEH, A.R.I.B.A., A.A.Dipl., has moved to 29, Buckingham-street, Strand, W.C.2. (Tel.: Trafalgar 1381.)

MR. F. BERTRAM MEWIS, F.I.A.S., F.I.Q.S., quantity surveyor, of Albany House, Britannia-square, Worcester, has removed to larger offices at 25, High-street, Worcester. (Tel.: Worcester 5446), and would be pleased to receive trade catalogues, etc.

FROM "THE BUILDER" OF 1852

Saturday, September 4, 1852.

ARCHITECTURAL COMPETITION.—*Commercial Travellers' School Competition.*—We understand that in more instances than one, competitors for the Commercial Travellers' Schools have not only submitted plans, but have sent round *lithographed copies* of them with printed explanations, to each individual member of the committee! Printed descriptions of designs submitted have, in like manner, been sent, without plans, and remarks tending to prejudice the committee against a particular style of architecture, "a fashion of the present day," as the author designates it. This must be regarded as taking an undue advantage and unfair to the other competitors, and should be looked at suspiciously by the committee, if they are determined to act justly.

RESTORATION OF ST. GILES'S CHURCH, CRIPPLEGATE

UNDER THE DIRECTION OF W. GODFREY ALLEN, MA, FSA, FRIBA, & J. GILBERT P. MEADEN, FSA

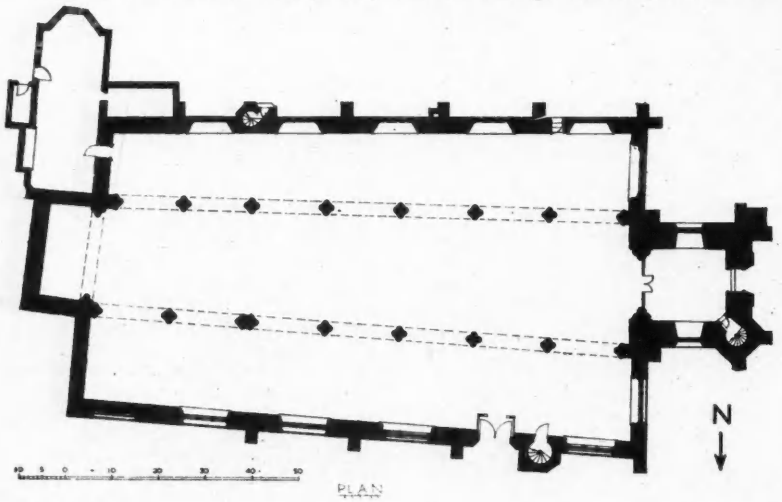
Right: General view of Church from south-west. Note bastion of London Wall on right..

IN the great fire raid on the City of London on the night of December 29, 1940, the church of St. Giles, Cripplegate, was completely burnt out, only the outer walls and the arcades, badly calcined in parts, and the shell of the tower surviving. The church is now in process of restoration under the direction of Mr. W. Godfrey Allen, M.A., F.S.A., F.R.I.B.A. Surveyor to St. Paul's Cathedral, in association with Mr. J. Gilbert P. Meaden, F.S.A. The work is not likely to be finished for another two years, but it has now reached a very interesting stage, which is here recorded.

POINT OF ARRIVAL

A few facts about the history of the church may first be given.

St. Giles stands outside the City wall, a short distance to the west of Cripplegate, and like many other churches built in a similar position is dedicated to the patron saint of cripples, who is reputed to have been an eighth-century French hermit who suffered with lameness. In the eleventh century Cripplegate was the most important entry to the City from the north and was no doubt a good place for the purpose of soliciting sympathy and alms. There seems to be little doubt that the name Cripplegate is a corruption of the words "crepel gaet," Anglo-Saxon for "an underground passage and street or way." The Roman town had its military section in the north-west corner of the City, and the north gate corresponded with the site of Cripplegate, as recently proved by excavations. In front of such an important entry would stand the barbican or fortified watch-tower, connected with the walled city by a fortified or protected covered way to enable free passage with comparative safety.



The first church on the site was built by Alfune, hospitaller or doctor of St. Bartholomew's Hospital, which was founded by Rahere the Monk about the same time, 1090. This church was no doubt a simple Norman building consisting of a nave with chancel or apse and probably a tower at the west. Although Stow claims that it stood on a site adjoining the present building there is reason to doubt this, because during some drainage works in recent years an old doorway with well-worn cill or threshold was found about five feet below the present ground level. This may have been a north entrance, and a further discovery, about the same level just in front of the pulpit, of heavy foundations helps to confirm this theory. It has further been reported that when some alterations to the tower were being carried out, very early masonry was encountered in the interior of the walls.

By the latter part of the fourteenth century the parish had outgrown the capacity of the church, which was completely rebuilt more or less on the existing very irregular lines. It is difficult to understand why there should be so great a difference in the length of the north and south walls and the width at east and west ends, but it is possible that the nearness to the City ditch and the nature of the ground affected the dimensions. The bastion of the old City wall and the presence of streams may also have contributed to the irregularity. Underground arches in the foundations have been found, which seem to point to provision for the passage

of water. The site was obviously a very wet one; in one corner of the churchyard was Crowder's well, much frequented by people suffering with sore eyes.

THE 14TH-CENTURY CHURCH

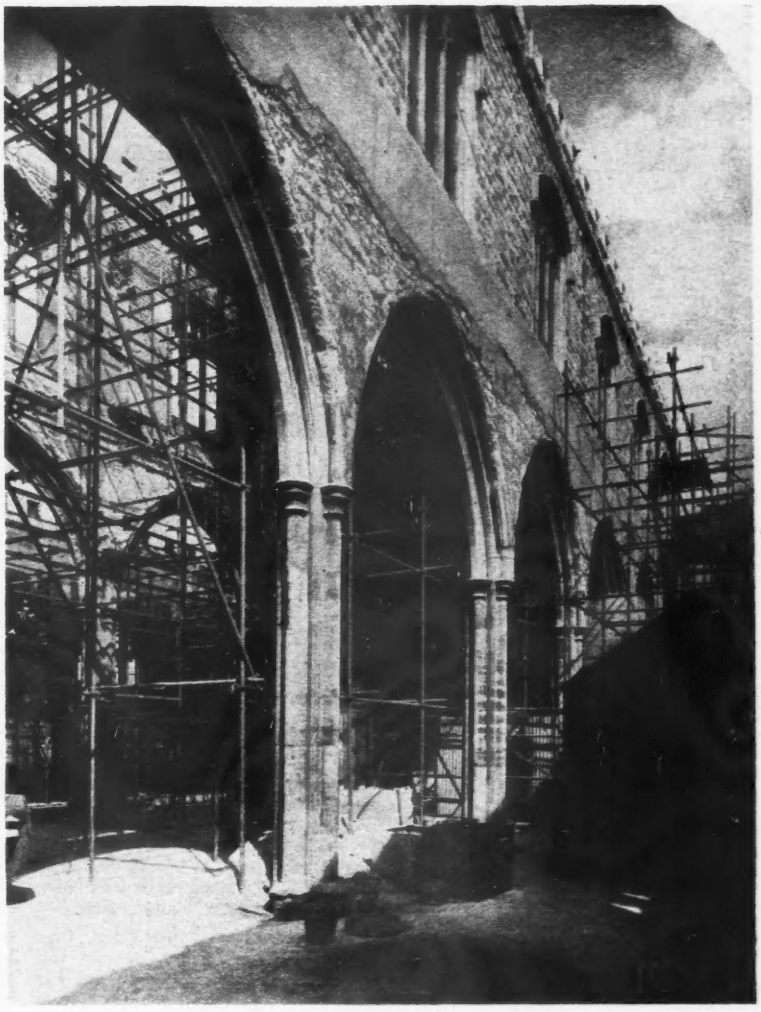
Very little is known about this fourteenth century church, and there are few references to it until the latter part of the fifteenth century, by which time the north-west portion of the parish was becoming a fashionable suburb, with residences erected by the nobility and the more prosperous merchants. The remainder of the parish was thickly populated with small houses and tenements and became a very congested and unhealthy quarter.

In 1545 a disastrous fire destroyed the church, leaving only the walls and tower standing. The roof over the chancel (which at this date was longer than at present, the extent having been determined by an old foundation laid bare when adjoining property was rebuilt) was repaired, and in 1624 and 1626 two side galleries were built (removed in 1880). In 1629 the steeple, being much decayed, was repaired. Owing to the unsettled state of the country no further information is on record until 1658, when the middle aisle was relaid with 8-in. coloured tiles.

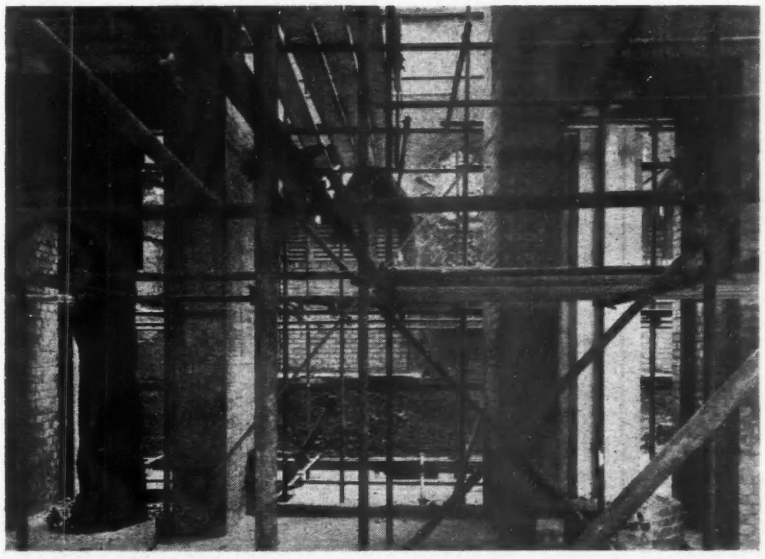
The Great Fire of 1666 did not do very much damage to the church owing to the protection given by the City wall and the wide churchyard, but money was spent about this time on the repair of glazing, which was no doubt damaged by the heat. About 1680 the height of the church was considerably increased by the building of clerestories. In 1682 the tower was raised 15 ft., in red brickwork and surmounted by a wooden cupola, which remained in place until it was destroyed in the blitz. A fire on November 29, 1897, caused damage to the roof, which had to be partly reconstructed.

The entrance gateway to the churchyard from Fore-street, which is dated 1660, was removed about 50 years ago when the street was widened. The stones of which it was composed were left in the churchyard and were recently recovered. Those which are undamaged or have any inscription on them are to be preserved. The Quest House and four shops built against the north wall in 1656 were removed in 1903, opening up the whole north side of the church. The chapel in the north aisle was dedicated in 1901, the reredos being brought from St. Bartholomew, Moor-lane, where it had been taken from St. Bartholomew by the Exchange when that church was demolished. This reredos was destroyed in the blitz.

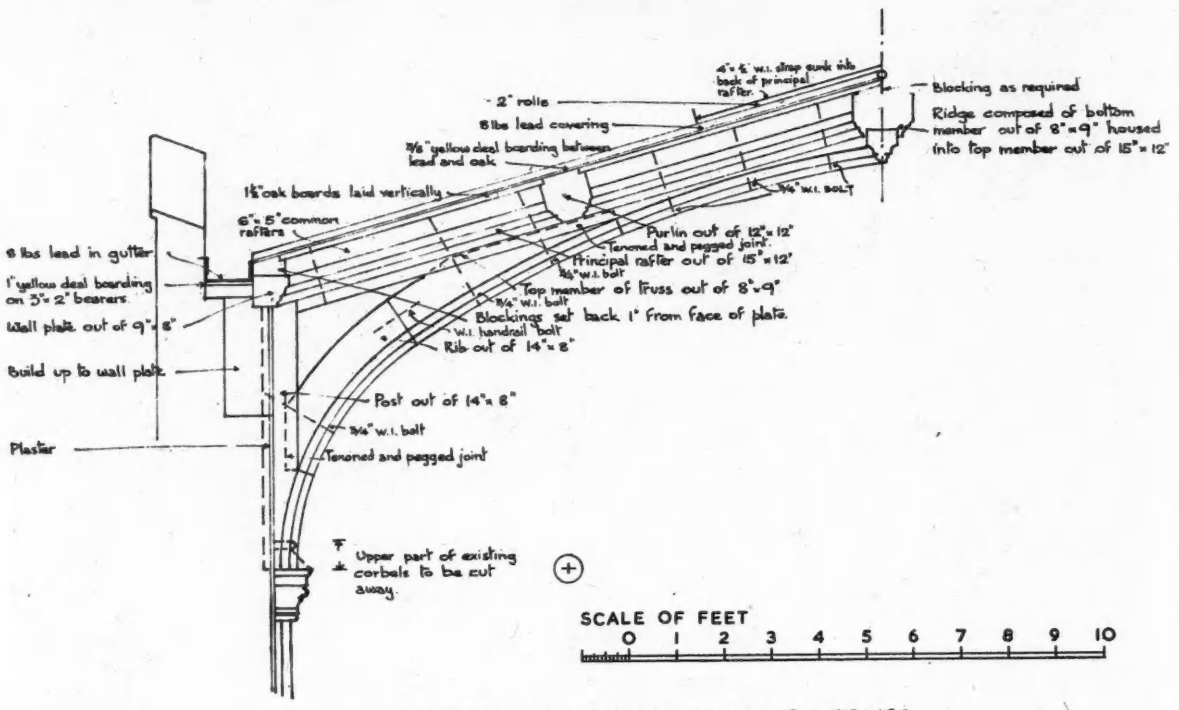
In 1913 the tower was strengthened and an oak screen erected in the lower arch at the west end of the church. During excavations in the floor the glazed floor tiles of an undisturbed pavement were found about four feet below the present floor, indicating that this is considerably higher than that of a former church on the site. This is not unusual, many other old City church floors having recently been found about four or five feet below the modern level.



View of Interior from South Aisle, looking north-east.



Part of South Arcade supported by reinforced concrete bulkheads on brick piers to facilitate rebuilding of columns. On left, calcined column to be rebuilt. On right, new column in place.

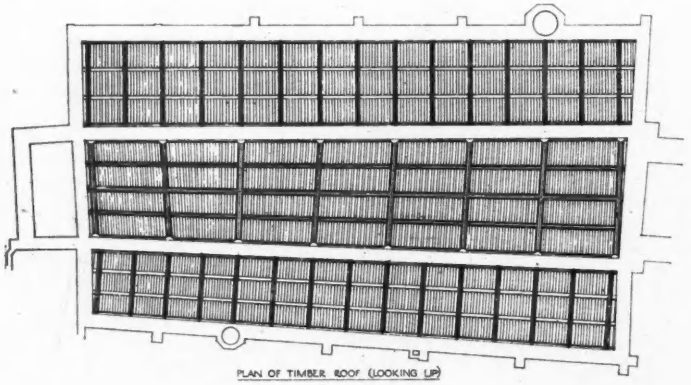

4" × 6" w.i. strap sunk into back of principal rafter
2" rolls
8 lbs lead covering
7/8" yellow deal boarding between lead and oak
1½" oak boards laid vertically
6" × 5" common rafters
8 lbs lead in gutter
1" yellow deal boarding on 3" × 2" bearers
Wall plate out of 9" × 8"
Build up to wall plate
Plaster
Blocking as required
Ridge composed of bottom member out of 8" × 9" housed into top member out of 15" × 12"
¾" w.i. bolt
Purlin out of 12" × 12"
Tenoned and pegged joint
Principal rafter out of 15" × 12"
¾" w.i. bolt
Top member of truss out of 8" × 9"
¾" w.i. bolt
Blockings set back 1" from face of plate
W.i. handrail bolt
Rib out of 14" × 8"
Post out of 14" × 8"
¾" w.i. bolt
Tenoned and pegged joint
Upper part of existing corbels to be cut away.
SCALE OF FEET
0 1 2 3 4 5 6 7 8 9 10

DETAIL OF HALF NAVE ROOF TRUSS.

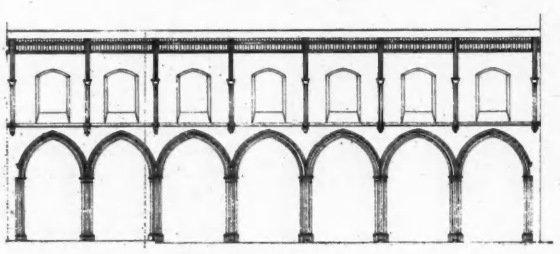
THE BELLS

St. Giles possessed 12 bells. The alteration and raising of the tower in 1682–3 was doubtless done at the behest of the first Earl of Bridgewater, who lived at Bridgewater House, Barbican, and was an indefatigable ringer. The vestry, in 1683, ordered " the third, sixth and biggest bells be forthwith cast and made tuneable to ring in peale to answer the other." Two years later the fifth bell was directed to be recast by the same bellfounder, Mr. Whiteman. Some of the bells were cast by Pack and Chapman in 1772. The tenor bell was dated 1787. All the bells were so seriously damaged in the blitz that they are being recast and replaced.

The church also possessed what was considered by many people the best chimes in London, made in 1795 by George Harman, of High Wycombe, a cooper by trade but an amateur clock and chime maker. These chimes, which played on the 12 bells, were repaired in 1849. A modern form of the old chimes is being installed in the tower together with a new clock mechanism.



PLAN OF TIMBER ROOF (LOOKING UP)



LONGITUDINAL SECTION

LINKS WITH THE GREAT

St. Giles has associations with many famous people, numbers of whom lived in the parish. Buried in the church are Sir Martin Frobisher, who died at Plymouth in 1594, John Foxe, the martyrologist (1576-1687), John Milton (died 1674), and John Speed, the topographer (died 1629). The living was held for some time by Lancelot Andrewes, afterwards Bishop of Winchester; and Oliver Cromwell was married in the church to Elizabeth Bourchier in 1620.

SOME NOTES ON THE PRESENT STRUCTURAL WORK

The restoration of the tower is now completed. Here the work consisted of the repair of the brickwork and renewal of the pinnacles of the topmost stage, the rebuilding of the cupola in English oak, the partial renewal of tracery and window openings, which are filled with Reamy-antique glass, the renewal of the oak beams and boarded flooring to the different stages of the tower, the construction of a new spiral staircase in the turret in partly reinforced *in situ* concrete, the opening up of an internal window on the staircase, the construction of a new west door in English oak, the repair of the large arched opening into the nave and the replastering of the interior of the tower.

The reinstatement of the arcades and the nave roof is now well in hand. The

roofing of the aisles has not yet been started. Owing to the calcined state of the interior a good deal of the stonework of columns and arches has had to be renewed. All labels on the nave arcades are new and much of the string-course work will need to be replaced. Bath stone is being used for the internal repairs.

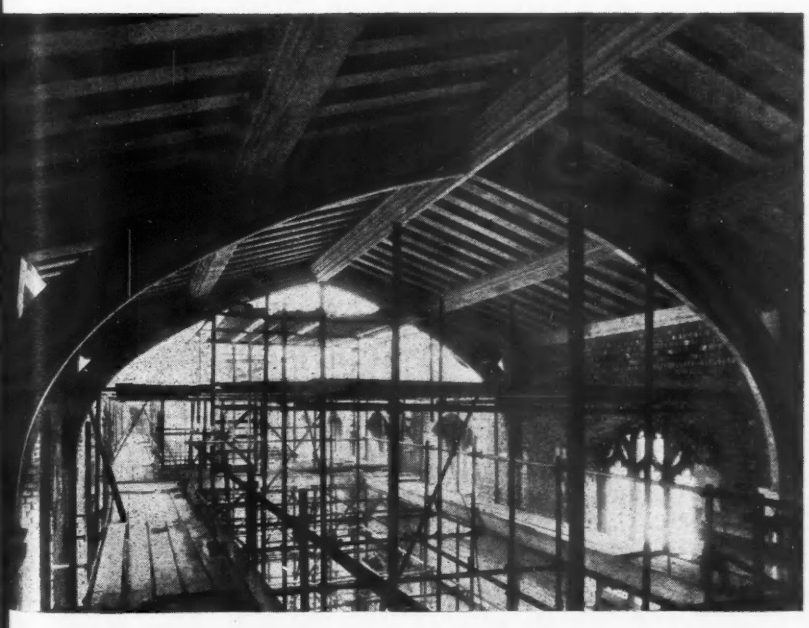
Three of the columns—two in the south arcade and one in the north—are being completely rebuilt. One of the accompanying photographs shows the measures taken on the advice of Mr. Godfrey Allen, immediately after the blitz, to support parts of the damaged arcades. On either side of the badly calcined columns brick piers were built and reinforced concrete bulkheads cast across their tops and around the spandrels of the arches, thus supporting the superstructure independently of the columns. It was therefore a simple matter to remove the damaged columns for rebuilding on new bases and without affecting the stability of the structure. In due course the piers and bulkheads will be removed.

New roof under construction.

DIGNIFIED SIMPLICITY

In designing the new roof the aim of the architects has been to provide a structure of dignified simplicity on the lines of what probably existed before the fire of 1545. The work of restoration is more exacting, and at the same time more interesting, than would normally be expected owing to the irregularity of the plan. Only the north wall and the north arcade are parallel. The nave tapers from 25 ft. at the west end to 20 ft. at the east, and the south aisle from 17 ft. to 13 ft., and the columns are not equidistant either transversely or longitudinally. Thus all the roof trusses are of different widths and pitches and there are variations in the lengths of purlins and rafters. The trusses and other parts have been made largely by hand and set out separately in the builders' shops at Burgess Hill.

The construction of the trusses (eight in number, of English oak left in its natural state) is shown in an accompanying detail. In effect, they are mechanical cranked beams, and therefore exert no thrust, for each truss is not only tenoned-and-pegged jointed, and bolted, but strengthened by a 3-in. wrought-iron strap sunk into the back of the principal rafter and by two 5 ft. 9 in. wrought-iron tie-rods run through the apex. Similar rods brace the haunches and posts. All metal is rust-proofed by a special process.



Underside of new roof. View looking west.

BACK TO THE OLD

In the roof destroyed in the blitz, a work of the late nineteenth-century, the trusses for some obscure reason were made to rest not on the old corbels between the clerestory windows, but on new ones placed over their arches. For the new roof it was rightly decided to revert to the old arrangement. The unwanted corbels have therefore been removed and new ones built in the original positions between the windows, and into these the new trusses are dowelled. The corbels are carved to represent oak, sycamore, grape vine, thistle, etc.

The trusses support purlins which in turn support the common rafters, which are rabeted out at the back for a single board which acts as the boarding on the roof, and the boards consequently run in the same direction as the rafters. The whole structure is covered with diagonal pine boarding, which insulates the copper roofing from the oak so as to prevent any chemical action taking place which might destroy the copper. Between the boarding and the copper are two layers of inodorous felt. There is a dampcourse behind every roof truss, and all mortices, tenons, etc., hidden from view are treated with Rentokil as a precaution against infection by insects.

The chancel arch is completely new, and at the springing on either side are carved the heads of Sir Martin Frobisher and Bishop Andrewes. The window at the west end of the north aisle has been renewed in Portland stone.

SOME DISCOVERIES

Some interesting discoveries have been made during the restoration. In the rebuilding of the respond to the chancel arch and the eastern-most bay of the north arcade a quoin with bead and splay was found, presumably part of the church burnt in 1545 (perhaps the jamb of the east window of the north chapel).

This had some remnants of medieval painting upon it. On the north and south sides of the sanctuary some fifteenth-century windows were found, bricked up and plastered. They will be kept as revealed, though it will not be possible to open them up to the light; as will be seen from the plan, the vestry, a nineteenth-century addition, is behind the window on the south side. Traces are also to be seen of a smaller window in the north-east wall. The east wall originally had a large window of Tudor type, which was later blocked up and replaced by a classical elliptical window at a high level.

We can have nothing but admiration for the sympathetic manner in which the restoration of this famous old church is now being carried out. Design and craftsmanship are alike admirable, and when the work is completed we shall have a restoration which is in every respect a credit to our time.

G. J. HOWLING.

Messrs. Norman and Burt, Ltd., of Burgess Hill, Sussex, are the builders, who are also responsible for the masonry, the oak roof and joinery, the lead rainwater pipes and heads, the carving, and scaffolding to nave and aisles. The following firms are also associated with the work.

F. Braby and Co., Ltd., copper roofing; Ragusa Asphalte Paving Co., Ltd., asphalt flats; Essex Steel Scaffolding Co., Ltd., steel scaffolding (to tower only); Belshaw and Co., Ltd., electric wiring; J. W. Gray and Son, Ltd., lightning conductors; Goddard and Gibbs, leaded glazing and ventilators; Mears and Stainbank, bell frame; Gillett and Johnston, Ltd., clock and tune-playing machine. The following firms have supplied goods:—Turtle and Pearce, Ltd., flagstaff; W. Bainbridge Reynolds, Ltd., wrought-iron door fittings.

Mr. O. R. D. Wallis is the director in charge of the work, and the general foreman is Mr. G. W. Pennells, the foreman mason Mr. F. R. Dawes, the foreman carpenter Mr. S. L. Ball, and the carver Mr. W. Court.

CORRESPONDENCE

A CITY ARCHITECT'S DUTIES

To the Editor of *The Builder*

SIR,—Mr. Macdonald's historical data on the examinations open to architects in 1674, and on the expansion of the quantity surveying profession in the last generation introduce subjects which are not being discussed and are therefore not relevant. What is relevant is that the Corporation of the City and County of Sheffield propose to appoint a City Architect whose duties are not only to include the preparation of bills of quantities for building works, *i.e.*, houses and schools, but also for the civil engineering works of roads and sewers (generally considered the province of the chartered municipal engineer) without indicating in their public advertisement (your issue of August 15) that the architect so appointed besides having architectural and statutory qualifications is to have professional quantity surveying and municipal engineering qualifications in addition.

The quantity surveyors who do all the quantity surveying work in these elephantine "architectural" departments require professional quantity surveying qualifications as a condition of their employment.

C. R. VINYCOMB.

54, Wickstead-avenue,
Leagrave, Luton, Beds.

PAINT - WORK SPECIFICATION

To the Editor of *The Builder*

SIR,—As a large firm of painting contractors, may we refer to the following specification which is being included by many corporations and councils in their painting contracts where a white or broken white finish is called for:—

1 coat pink or red lead priming paint.
1 coat undercoating paint.
1 coat finishing paint.

With such a treatment it *is* possible to obtain a reasonable "finish" but no more. Many of our clients, however, insist upon a result quite incompatible with this reduced specification, one, indeed, that can only be obtained if at least one further coat of paint be applied. This, of course, we should be quite happy to apply if we were paid accordingly, but in practice we find that a "three-coat" result is expected but payment only certified on the basis of a two-coat application.

Not only is this grossly unfair to the contractor in so far as it greatly increases his costs and also slows up the output, but it also has its repercussion on the men, who, by keeping to the specification, find it almost impossible to satisfy clerks of works, etc.

We know, of course, that there are paints on the market which claim to "cover" even black in one coat, but such materials do not comply with the specifying authorities' requirements. Often the materials to be used are chosen after small sample panels, prepared in laboratories, have been supplied by the paint manufacturers, but this however is quite a different proposition from painting commercially large surfaces and panelled doors on housing estates and such like contracts.

In fine, it is surely unreasonable, and unfair, to expect the impossible.

A. G. MOORE,
Governing Director, Decorative Painting Contractors, Ltd.
Hounslow.

FIRE RESISTANCE OF ASPHALT

To the Editor of *The Builder*

SIR,—With reference to the Report of Roofing Committee, Central Council for the care of Churches, published in your issue of July 18, there appears to be some confusion in the use of the terms "asphalt" and "bituminous materials" in Clause 7 which, it is felt, was not in the minds of the eminent authors of the Report. The term "bituminous material" obviously refers to bituminous felt roofing, but it may be pointed out that asphalt itself is a mixture of bitumen and mineral aggregate, and may therefore rightly be termed a "bituminous material"; whilst bituminous felt may support combustion, asphalt is non-inflammable and highly fire resistant. It is, in fact, a material approved by the Rules of the Fire Offices' Committee for fire-resisting construction.

During the war, it was proved conclusively that asphalt was able to withstand the attack of incendiary bombs, which invariably burned themselves harmlessly away on asphalt roofs or floors, and the number of buildings which owe their survival of the "blitz" to an asphalt roof can never properly be computed, though there are many authentic records supporting this claim.

CLIFFORD W. FRY, F.C.I.S.,
Secretary, The Natural Asphalte Mine-Owners and Manufacturers Council.
94-98, Petty France, S.W.1.

METERING WATER

To the Editor of *The Builder*

SIR,—From recent experience I consider that more notice should be given to the charges for water from the Metropolitan Water Board on buildings under construction.

I have recently built a bungalow, value £2,200, on which the Water Board were demanding their usual 5s. per cent, *i.e.*, £5 10s. 0d. Fortunately I was able to point out to them that my water was metered, and the cost of water for this bungalow through the meter was approximately 3,000 gals., namely 4s.

Would it not be advisable, therefore, for all builders on small sites where the minimum of 20,000 gals. per quarter would be used, always to insist upon a meter?

W. J. ALLEN.
Managing Director,
Allen and Greaves, Ltd.
Angel-road Works,
Edmonton, N.18.

BOOKS RECEIVED

WORKED EXAMPLES IN ILLUMINATING ENGINEERING.—SOLUTIONS TO EXAMINATION QUESTIONS. By R. W. Ames and J. B. Harris. (London: Macdonald and Co. (Publishers), Ltd.) Price 21s.

FORCES IN FRAMED STRUCTURES. By T. Lyle Morgan. (London: Eyre and Spottiswoode (Publishers), Ltd.) Price 25s.

BUILDING PRACTICE MANUAL. By R. W. White. (London: Chapman and Hall.) Price 39s.

PAINTING AND DECORATING. 3rd. Ed. By John P. Parry. (London: Crosby Lockwood and Son, Ltd.) Price 7s. 6d.

MODERN FARM DAIRY EQUIPMENT. By R. T. Needham. (London: Leonard Hill, Ltd.) Price 15s.

BRITANNICA BOOK OF THE YEAR, 1952. (London: Encyclopaedia Britannica, Ltd.) Price £3 3s.

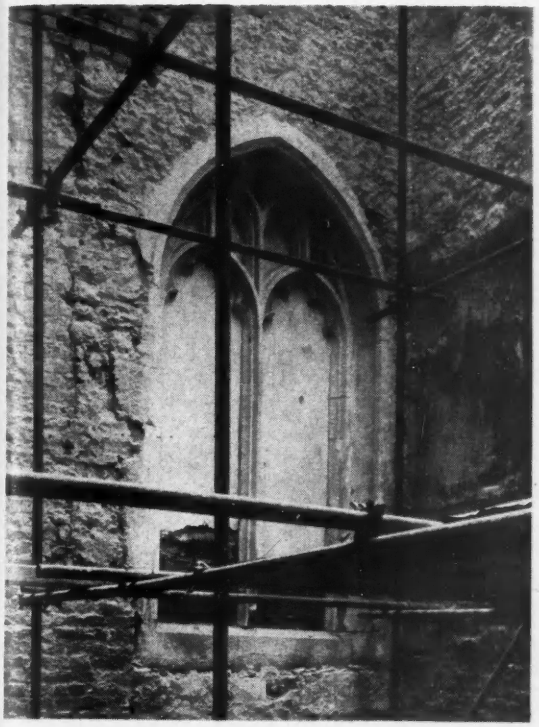
MODERN CABINET WORK. By John Hooper. (London: B. T. Batsford, Ltd.) Price £2 10s.

STEELWORK IN BUILDING. By W. Basil Scott. (London: E. and F. N. Spon, Ltd.) Price 25s.

THE MODERN SHOP. By Bryan and Norman Westwood. (London: Architectural Press.) Price 30s.

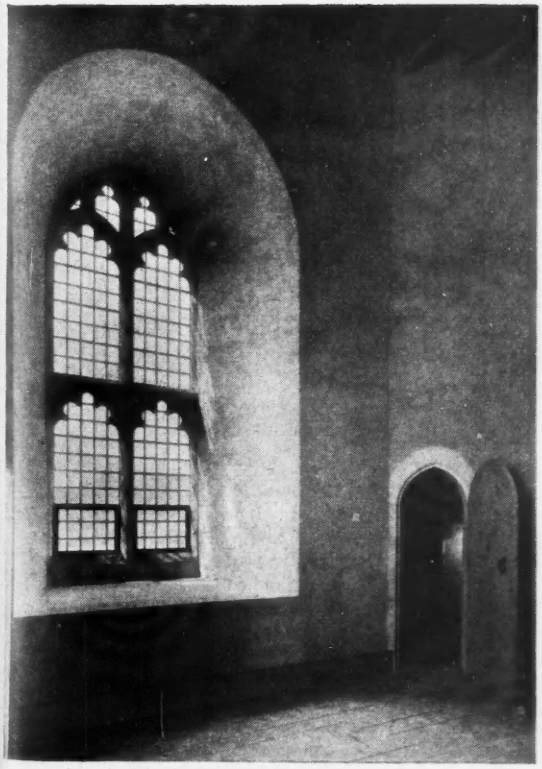
HIDUMINIUM TECHNICAL DATA. (Slough: High Duty Alloys, Ltd.).

*** *Books reviewed in these columns may be obtained on application to the Book Centre, "The Builder," 4, Catherine-street, Aldwych, W.C.2. Cash (which should include 6d. to cover postage and packing) should accompany the order.*

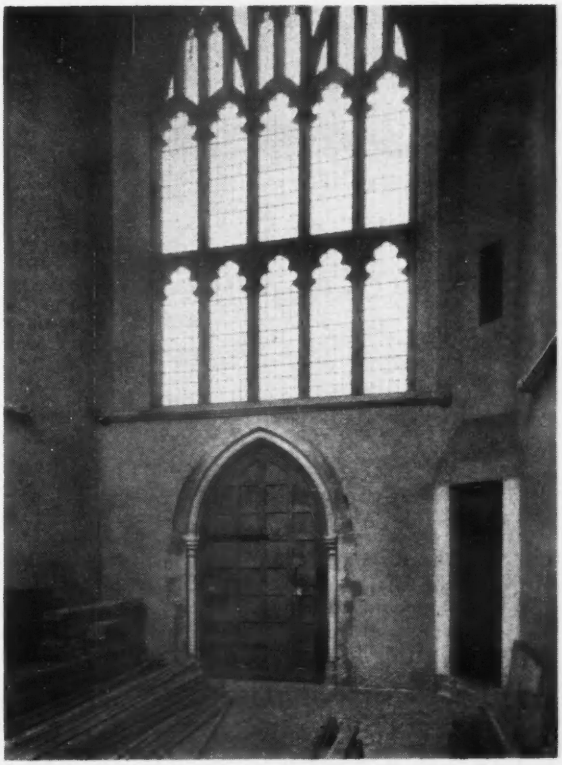


Newly-discovered Perpendicular window in north wall of Sanctuary.

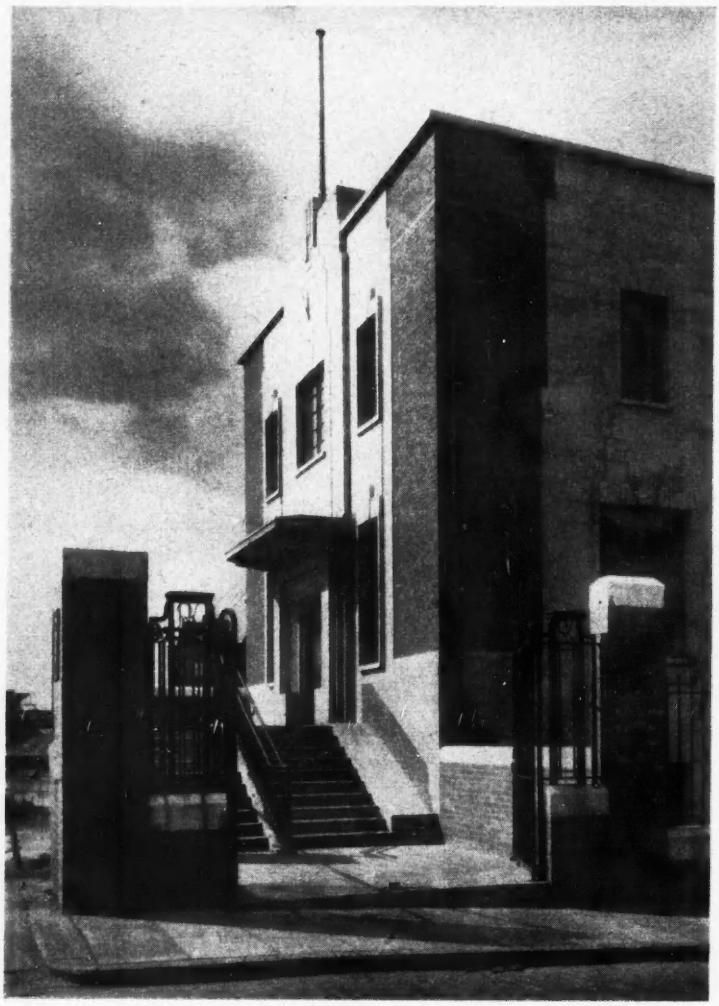
Old quoin with bead and splay, discovered during rebuilding of Chancel Arch Respond.



ST. GILES'S CHURCH, CRIPPLEGATE : *View inside restored tower. First stage, showing spiral staircase.*



View under restored tower, showing west window, new west door, and door to turret staircase.



Main entrance.

OFFICES AND FACTORY, MARSHGATE LANE, STRATFORD

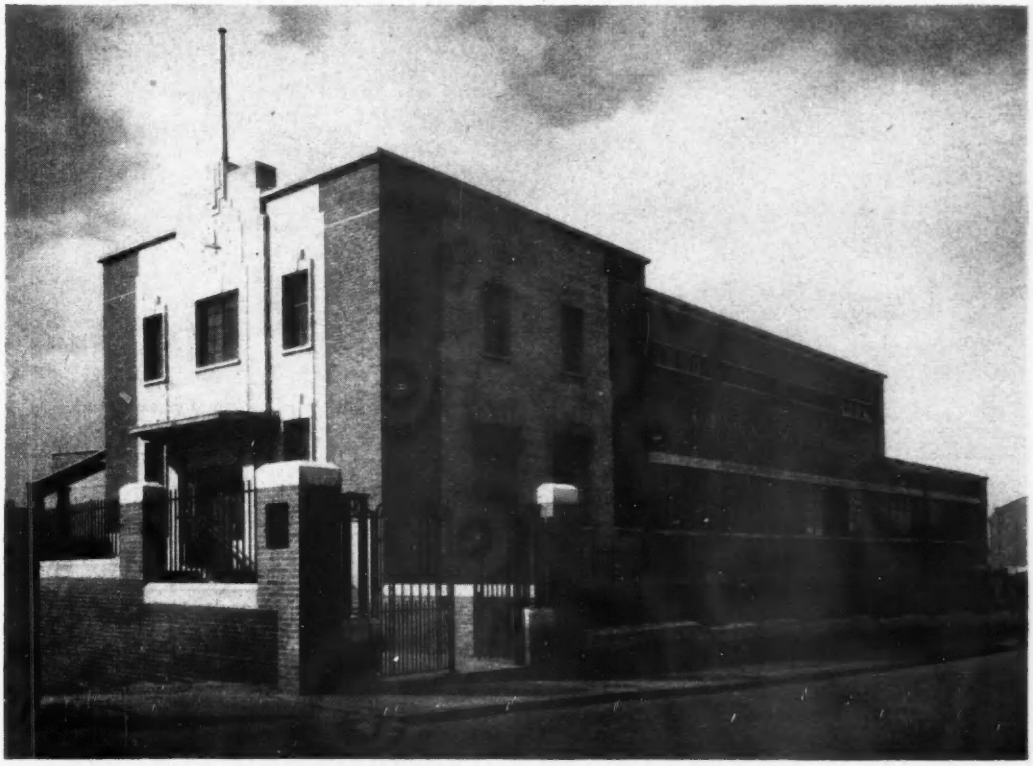
REGINALD W. LONE, FRIBA, FRICS, ARCHITECT

THE premises here illustrated comprise an office block and a glass bending shop for Robinson King and Co., Ltd., of Stratford. The block plan (on next page) shows the site to be one between Marshgate-lane and the River Lea; it leads almost straight off the High-street. The site is somewhat complicated, and in order to comply with the town planning requirements and at the same time get ample north light, the distribution of the two buildings had to follow the lines indicated.

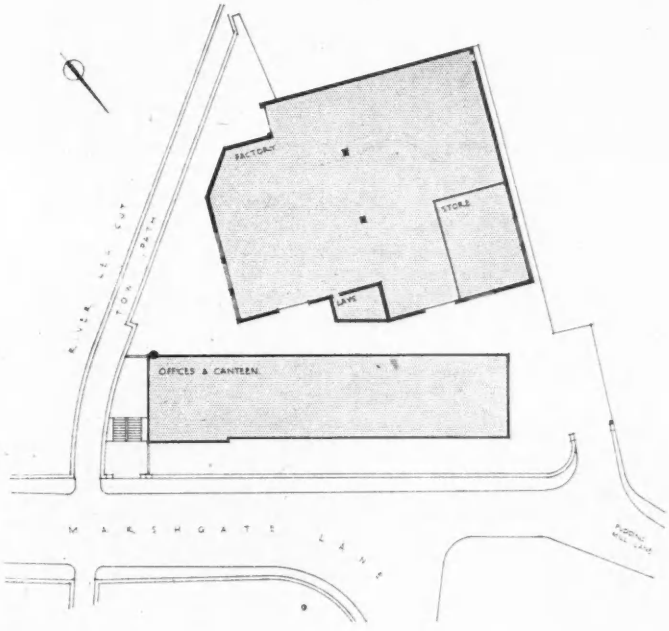
The glass bending shop is specially designed for the company's highly specialised work, and is of steel construction with brick carcass and asbestos roofing. Combined in the office block are a canteen for the operatives and a dining-room for the executives The main entrance is at first-floor level and is reached by steps from Marshgate-lane. It was so designed to overcome the very big drop in levels between the road and the somewhat awkward approach due to the hump in the roadway over the river bridge.

The general construction is of steel framing with Dorking facing bricks and reconstructed stone dressings, steel casement windows, etc. The internal construction, embodying concrete staircases, is designed and carried out for maximum efficiency and hygiene. A special feature is the all-glass central corridor.

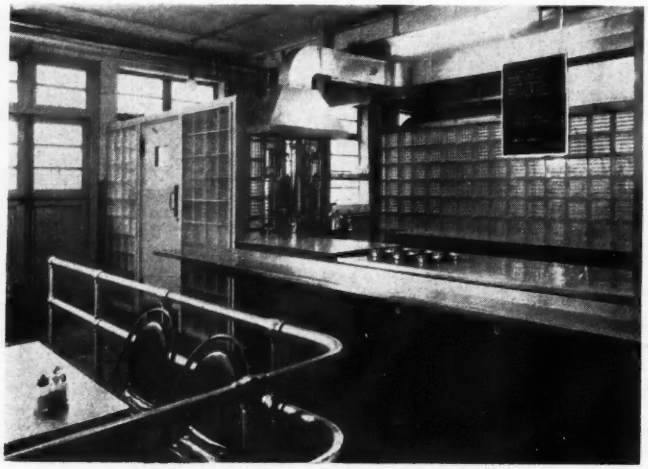
Owing to the very concentrated nature of the atmosphere in this particular district, and particularly



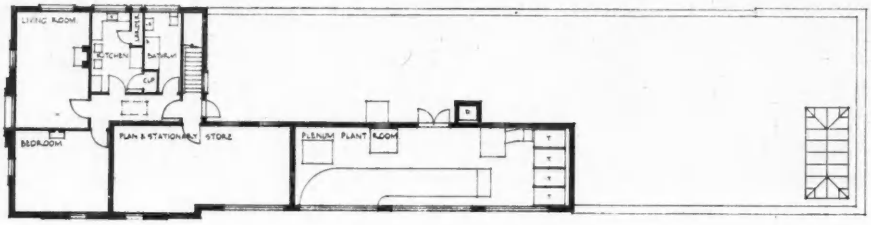
A view from Marshgate-lane.

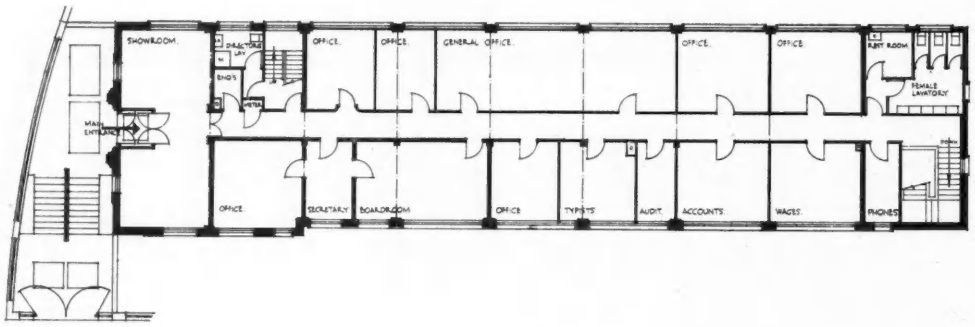


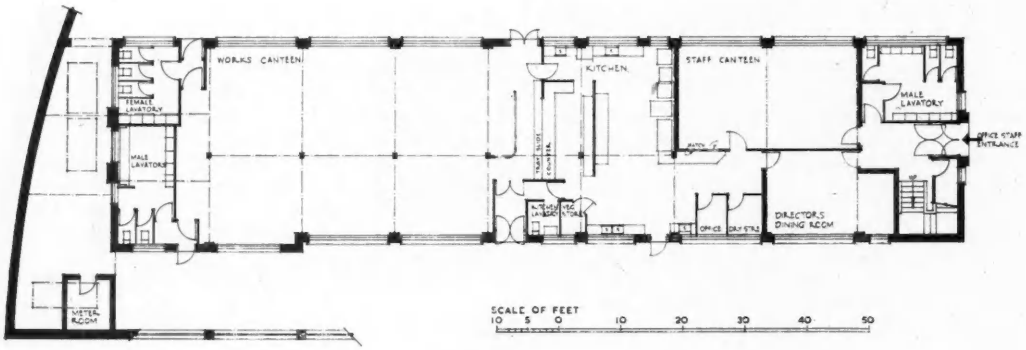
Block plan.

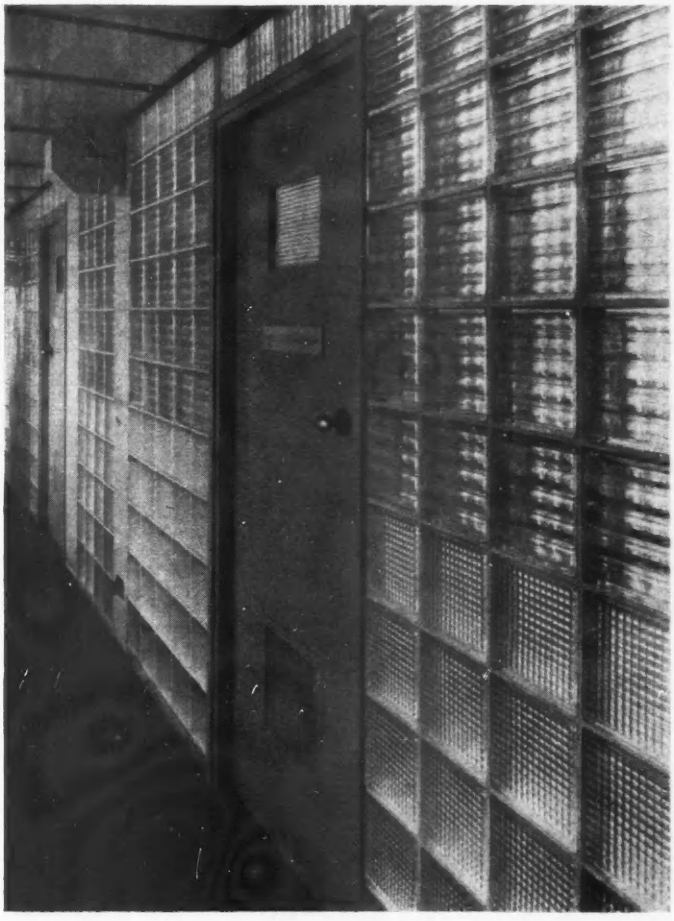


Left : Counter, staff canteen.
Below : Plans of ground, first and second floors.

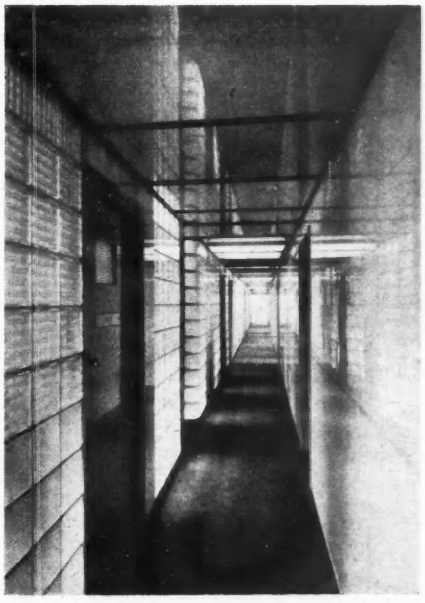








Two views of all-glass central corridor.



the high percentage of fine grit from the local power station, the heating has been carried out by means of a full plenum heating installation which also embodies plenum ventilation. All the air which enters the premises passes through the plenum plant and not through open windows.

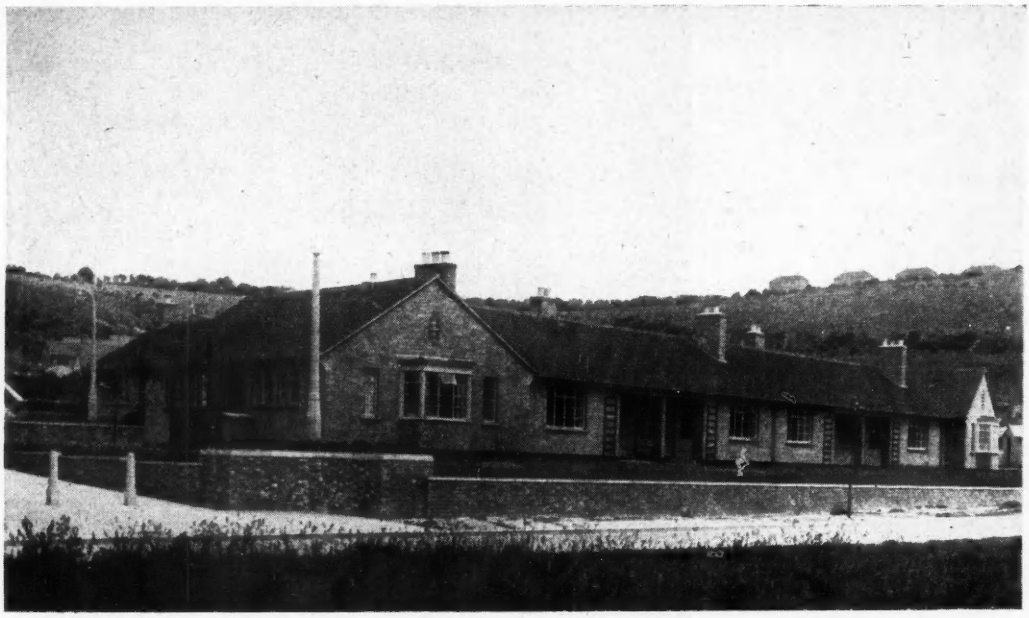
The consultant engineers were Messrs. F. R. Bullen and Partners, and the quantity surveyors, Messrs. Gardiner and Theobald.

The general contractors were Messrs. W. and C. French, Ltd., of Buckhurst Hill, Essex, and the following is a list of sub-contractors :—

Steelwork, Aston Construction Co., Ltd. ; reconstructed stonework, Empire Stone Co., Ltd. ; asbestos roofing, Boddy Roofing Co., Ltd. ; roof glazing, British Challenge Glazing Co., Ltd. ; asphalt work, Highways Construction, Ltd. ; central heating and plenum plant, Norris Warming Co., Ltd.

Plumbing, H. Tattersall, Ltd. ; electric light services and equipment, Austin Bros. Electrical Co., Ltd. ; tiling, Carter and Co. (London), Ltd. ; casement windows, Crittall Manufacturing Co., Ltd. ; wood block flooring, Acme Flooring and Paving Co. (1904), Ltd., Barking, Essex; terrazzo mosaic, Diespeker and Co., Ltd. ; wrought iron-work to grilles and gates, Grundy Arnatt, Ltd., Teddington-on-Thames ; door and joinery furniture, Yannedis and Co., Ltd. ; painting materials, Mander Bros., Ltd.

OFFICES AND FACTORY, MARSHGATE LANE, STRATFORD



General view of a block of six bungalows. Below : Layout.

OLD PEOPLE'S HOMES, BUCKLAND VALLEY ESTATE, DOVER

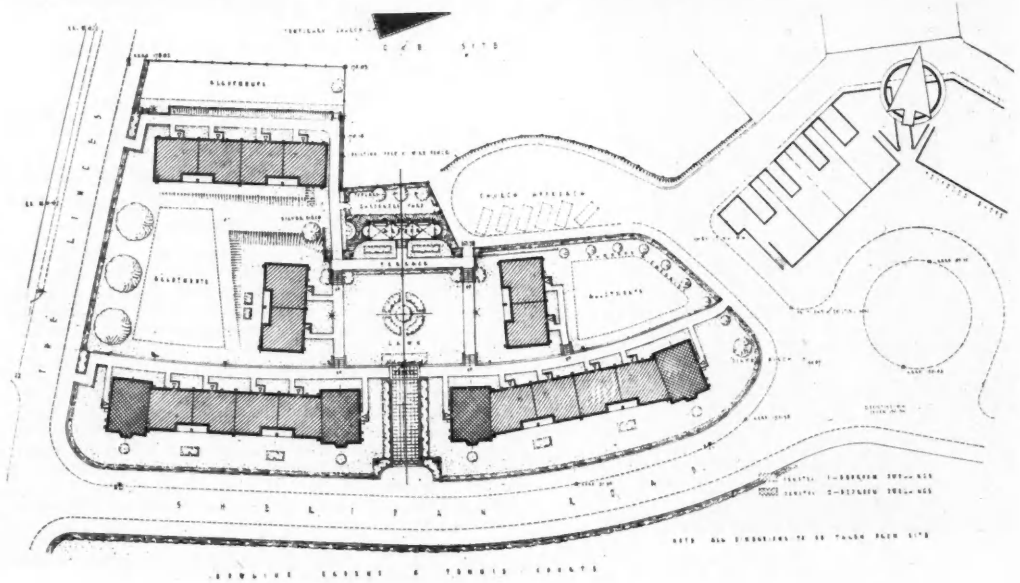
DAVID R. BEVAN, AMICE, AMTPI, MIMun.E, BOROUGH ENGINEER AND SURVEYOR

W. N. SCAIFE, FRIBA, ARCHITECT IN CHARGE

A GROUP of 20 dwellings for occupation by aged people of Dover has been built by the Corporation with the aid of a grant of £15,000 from the Lord Mayor of London's National Air-Raid Distress Fund. The dwellings were formally opened on March 13 last by Sir George Wilkinson, Bart., Lord Mayor of London, 1940-41, chairman of the Fund.

The name " Wellington Gardens " was chosen for the estate in recognition of New Zealand's generous contribution to the fund, and particularly of that made by the citizens of its capital city.

Planning.—The site is of irregular outline, with appreciable fall to the south which necessitated a considerable amount of excavation and levelling. Flights of steps have been avoided as far as possible in laying out the footpaths and where these could not



be dispensed with they are "easy going" and are provided with a handrail each side.

The scheme comprises 16 one-bedroom and four two-bedroom bungalows arranged in blocks of two, four and six, in grounds laid out with the help of a legacy left by Miss J. A. Bourner, of Dover. They are grouped as an individual unit, yet form an integral part of one of the Corporation's main housing schemes. The principal frontage is to Sheridan-road, at the east end of which is located the small shopping centre for the estate.

As far as practicable the scheme has been laid out symmetrically on a north-south axial line, and at the point where the main approach from Sheridan-road meets the east-west footway, a bronze tablet has been set up recording the grant, legacy and formal opening ceremony. Behind this at a slightly higher level is a lawn backed by a creeper-clad retaining wall supporting a terrace on which stands an open arbour constructed of brick piers, oak beams and bearers, over which climbing roses and other plants are being trained. Protected on the north, east and west sides by yew hedges, this will form a pleasant retreat.

Each dwelling contains a living-room, kitchenette, one or two bedrooms, bathroom with w.c., small hall, and outer porch with fuel store and bin cupboard. All living-rooms face either west or south, and those to the one-bedroom dwellings open on to small verandahs. Entrance porches are protected by trellis screens which will be covered with climbing plants.

Construction and Materials.—External and party walls are of 11-in. cavity brickwork, internal walls and partitions being of 4½-in. brickwork, and 3-in. and 2-in. breeze slabs. Mild stocks have been used as facing bricks to the dwellings, and sand-faced Flettons to boundary and retaining walls.

Floors are of Accotile on screeded damp-proof membrane and concrete. Roofs are timber covered with interlocking tiles on battens, felt and insulating board. Windows have metal casements fitted with friction hinges, the cills being of plain red tiles.

Heating.—A "Redfire" grate with back boiler is fitted in living-rooms, with an indirect cylinder in kitchen or hall cupboards. First bedrooms are fitted with a small open fire. Electric points are provided in all rooms and in cylinder cupboards for alternative heating or other appliances. A gas point is provided at all fireplaces for alternative heating or lighting-poker. A radio aerial is provided in each roof space and carried to a socket outlet in the living-room.

Kitchenettes are equipped with white-glazed stoneware sinks with a detachable draining board each side. Ample storage cupboard accommodation is provided and the one-bedroom dwellings have a small dresser in addition. A cooker and a wash boiler are also provided and tenants are given the choice as between electricity and gas for these fixtures.

The general contractors were Messrs. Groombridge and Binfield, of Dover.

Costs.—The tender price was £22,550, and the completed contract amounted to £23,500, of which increased costs of labour and materials accounted for £1,770. A brief analysis of the final total shows that the costs per dwelling were as follows :

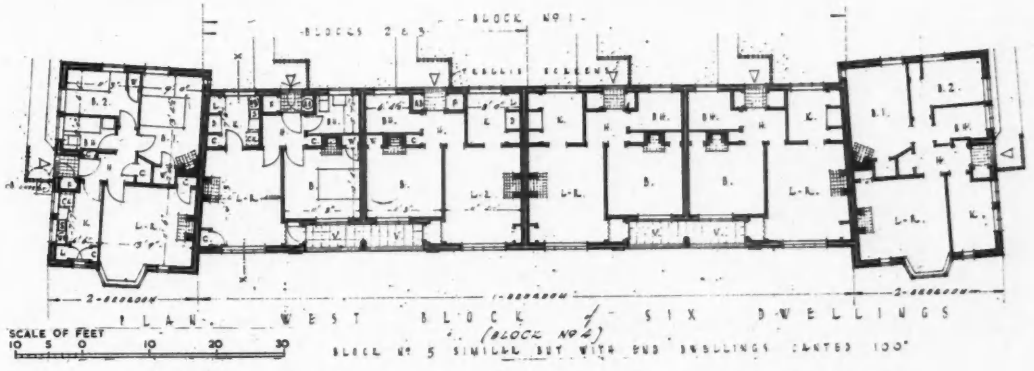
Preliminaries	£14	per	dwelling.
Foundations and work to D.P.C. ...	90	,,	,,
Superstructure	600	,,	,,
P.C. sums	150	,,	,,
Sitework (paths, drainage) ...	60	,,	,,
Cookers and utilities	40	,,	,,
Gardens—lighting, etc.	125	,,	,,
V.O.s and dayworks	6	,,	,,
Increased cost of labour	26	,,	,,
Increased cost of materials ...	64	,,	,,
Total	£1,175	per	dwelling.

Rents.—The two-bedroom type of dwelling is let at a gross rental of 12s. 7d. per seek, while the single-bedroom type is let at 10s. 4d. per week gross.

Mr. Philip V. Marchant, A.M.I.C.E., M.I.Mun.E., was Borough Engineer at the time of the scheme's inception and throughout the earlier part of its construction. On his leaving Dover to take up the appointment of Borough Engineer, Surveyor and Architect of Wandsworth, the work was carried to completion by his successor, Mr. David R. Bevan, A.M.I.C.E., M.I.Mun.E., A.M.T.P.I. Mr. W. N. Scaife, F.R.I.B.A., was the architect in charge of the scheme. Mr. J. F. Brown, F.F.S.(Eng.), (Quants.), was quantity surveyor, and Mr. Morecraft and Mr. Burville were the clerks of works. The turfing and planting of grounds was carried out under the supervision of Mr. E. J. Taylor, Parks Superintendent. Following is a list of sub-contractors :

Bulk excavation, H. C. Simmons, Dover ; electrical installation, Page's Modern Electrical Contractors, Dover ; tiled roofs, John Williams and Co., Dover ; "Accotile" flooring, Neuchatel Asphalte Co., Ltd.

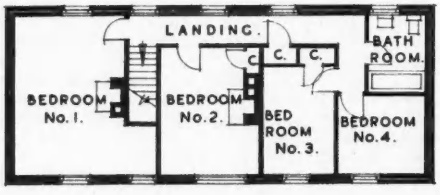
Suppliers.—Roof tiles and window "boards," Langley, London, Ltd. ; facing bricks, Eastwoods Sales, Ltd., and Cremer, Whiting and Co., Sittingbourne ; breeze partition slabs, Castle Concrete Co., Ltd., Dover ; metal casements, Henry Hope and Sons, Ltd. ; baths, grates and surrounds, Alfred Olby, Ltd., Folkestone ; sanitary fittings throughout are fitted with "Supataps" ; ironmongery and glass, Henry Olby, Ltd., Dover ; doors, Gliksten Doors, Ltd. Paint and enamel, Jenson and Nicholson, Ltd. ; "Tretolin," Tretol, Ltd. ; bronze inscription tablet, Bromsgrove Guild, Ltd., Bromsgrove ; Portland stone surround to tablet, E. Whitnall and Sons, Dover ; spun concrete lighting columns, Stanton Ironworks Co., Ltd., near Nottingham ; reinforced concrete guard posts, Kent Concrete Products, Canterbury.



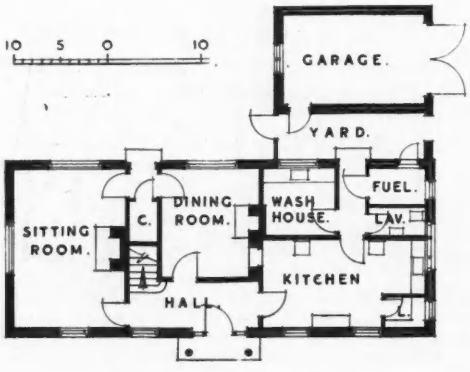
OLD PEOPLE'S HOMES, BUCKLAND VALLEY ESTATE, DOVER

Entrance front.

A FARMHOUSE AT POLESDEN LACEY, NEAR DORKING



FIRST FLOOR PLAN.



GROUND FLOOR PLAN.

DAVID E. NYE & PARTNERS, ARCHITECTS

THE Polesden Lacey Estate, consisting of the house, furniture and 910 acres of agricultural land and woodland—by far the richest bequest ever made to the National Trust—was bequeathed by the Hon. Mrs. Ronald Greville to the Trust in 1942.

The photographs and plans illustrate a small farmhouse which has recently been erected to the designs of Messrs. David E. Nye and Partners, and was required in connection with the farming of the estate. The elevations were designed to be in keeping with the architectural character of the large house, and the walls are of 11 in. hollow brick construction, rendered in a cement-lime mortar, the roof being covered with slates. The cost of the building, including garage and site works, was approximately £2,800.

The general contractors were Messrs. R. Holford and Co., of Guildford; sub-contractors and suppliers being: roofing, John Williams and Co. (Rotherhithe), Ltd.; electrical installations, Requirements Electrical and Engineering, Ltd.; ironmongery, Comyn Ching and Co.; and hardwood floors, the Windsor Flooring Co.

WHEN IS A FOOT SUPER?

A Housing Puzzle

By C. H. KITCHIN

HABIT is notoriously harder to lose than to acquire. Post-war housing, by local authorities under government direction, soon became a matter of standards, which meant that to a great extent it had to be a matter of rule-of-thumb. This, in turn, meant that there had to be some standard units of measurements and of comparison. Hence, the rapid rise to almost sacred status of the cost-per-foot-super.

Obviously there had to be some simple formula for comparison of costs. Subsidies were to be paid, so approval to housing schemes had to be given. It was a formula that anybody could understand—which may well account for its having become a habit. As long as housing standards remained constant it was not an unreasonable one. The Ministry of Health, then responsible for housing, took cost-per-foot-super to its bosom.

The Ministry of Housing and Local Government (new name, new management, same people) has, to its credit, gradually come to the conclusion that lower ceiling heights, the abolition of the minimum overall floor area and encouragement of careful planning to reduce costs have made nonsense of the cost-per-foot-super. It seems to some to have been replaced in the official mind by some other formula whose secrecy is jealously guarded lest an architect designing council dwellings should know whether or not he is working on the right lines. But the cost-per-foot-super lingers on to outstay its welcome in the lay minds of many housing committees of local authorities.

Having myself been a lay member of a housing committee, I can well appreciate the attraction of having at least one solid foundation for debate when the air is charged with technicalities. But it really is time we began to realise how this little false god can delight in misleading us.

Let us take at random two three-bedroom houses, one built to the standards of the *Housing Manual*, 1949, and the other to those of the "People's House" as exemplified in *Houses*, 1952.

A.—HOUSING MANUAL, 1949: Here we find a house of gross floor area (including outbuildings) of about 1,050 sq. ft. A recent volume of housing statistics gives details of the actual cost of houses completed by a large number of local authorities. Opening a page at random we find the average cost of three-bedroom houses built by authorities shown on that page as £1,357. This, of course, was before the latest wage awards.

Cost-per-foot-super—24s. 10d.

B.—HOUSES, 1952. The preface to this useful little book says that the plans in it should knock about £150 off the price, and some authorities confirm that this has in fact been achieved. So let us take the equivalent cost as £1,200. The smallest overall floor area shown in the designs, including store, is 882 sq. ft.

Cost-per-foot-super—27s. 2½d.

So our respected little "cost-per-foot-super" shows us that the "People's House" is a more expensive proposition than that built to 1949 standards. But which can the local authority let for the lower rental? There is no catch about this. Both are five-person houses with three bedrooms; the rooms of both are up to Dudley standards, but little if any more.

It is easy enough, one may say, to juggle with figures to make them prove one's point. But I do earnestly suggest that anybody who thinks he can argue from the basis of the cost-per-foot-super without giving himself away should work out the actual costs of his own or his neighbouring authorities' houses and compare, first, the cost-per-foot-super, then the cost per living unit and, consequently, the rental value.

The truth, of course, is that every living unit, be it a three-bedroom house, a two-bedroom house, a two-bedroom flat or an old person's dwelling, has to have a number of fittings which cost approximately the same—bath, w.c., kitchen equipment and the like. The lower the overall floor area is reduced by careful planning, the smaller is the figure by which the total cost must be divided to arrive at the cost-per-foot super. In other words, the more cleverly the architect contrives to implement present policy, the more expensive, in terms of cost-per-foot-super, his dwelling is going to appear.

Elementary? Of course, it is. But the most persistent mistakes are the most elementary ones, especially when they happen to have thrived for years under ministerial blessing. Only within the last few weeks has a Town Clerk commented of a block of six living units—two three-bedroom houses and four two-bedroom flats, the latter all with concrete floors, built for a total of just about £7,500—that the cost was very high compared with dwellings his own authority was building. Not only had he carefully worked out the cost-per-foot-super, but he had compared the result with that for three-bedroom terrace houses.

As a member of a housing committee, there was only one figure that interested me—the rental at which the dwellings could be let after the cost of land, development, and subsidies had been taken into consideration.

When is a foot super? When it is a yardstick!

GIFTS FOR FLOODED TOWNS

Builders' Plant to be Sent

A PRACTICAL gesture to assist the builders entrusted with the task of dealing with the major repairs necessary in flood-devastated Lynmouth is to be made by members of the Brighton, Hove and District Association of Building Trades Employers.

A lorry-load of builders' plant, subscribed to by members of the Association, is to be sent to the blighted area. Contact has been made with the leading federated builder in the district, and it has been ascertained that this intended contribution would be of real help to them and would be very much appreciated.

A further gift has been made by British Plimber, Ltd., in the form of a supply of Plimberite building boards to the value of £400 as a contribution towards rebuilding, and will be put to immediate use in converting a convalescent home which has been requisitioned for housing homeless persons.

PRIVATE HOUSING

Minister Urges Local Authorities to Make Fullest Use of Resources to Grant Additional Licences

HOUSING authorities are urged in a circular (No. 70/52) issued on August 27 by the Ministry of Housing and Local Government to grant licences for private houses wherever such homes can be built without prejudice to other essential services. The issue of any additional licences will not prejudice the maintenance of the authority's own housing programme.

The circular states that figures for houses completed and started show that numbers are running continuously at a higher level than in 1951, but adds: "Representations have, however, been made that in many districts there are still, on the one hand, many families in need of a home for their own occupation who are prepared to build one, and, on the other, builders and building workers not at present engaged on house building who could build these homes without prejudice to other essential services.

"The Minister is anxious that these resources should not lie unused through any inability to obtain licences, and that local authorities should not be inhibited from issuing licences through any apprehension that to do so would prejudice their own housing programmes. The Minister requests that the authority will review the applications which have been made to them for licences for the building of houses, and will, within a month of the date of receipt of this circular, inform the principal regional officer of the number for which they will be prepared to issue licences, if additional licences can be made available (for which purpose a form is issued). The principal regional officer will, on receipt of this information and in the light of his own knowledge of the amount of building labour available in the area, advise the authority to what extent, if any, licences for additional houses can be issued between now and the end of 1952.

"The licence should continue to be issued by the authority for the area in which the applicant desires to build. Since the number of licences issued will not affect the programmes of the authorities themselves, the Minister is confident that residence in the area in which it is desired to build will not be regarded as an essential qualification for a licence."

BOREHAM WOOD INQUIRY

L.C.C. Members to Hear Evidence

ARRANGEMENTS have been made, it is announced, for holding the promised inquiry in connection with labour conditions on the London County Council's housing estate at Boreham Wood. Oral evidence will be heard in private, and some may be taken at the site. The evidence is being heard by Mr. A. Reginald Stamp, chairman of the housing committee, and Mr. Victor Mishcon, chairman of the general purposes committee, with Mr. I. J. Hayward, leader of the L.C.C., acting as chairman of the inquiry.

HOUSING ACT, 1952

Ministry's Explanatory Circular

THE Ministry of Housing and Local Government, in Circular 63/52, draws the attention of local authorities to the provisions of the Housing Act, 1952, which received the Royal Assent on August 1. The main purpose of the Act, states the circular, is to increase the rates of Exchequer contributions payable under the Housing (Financial and Miscellaneous Provisions) Act, 1946, as amended by the Housing Act, 1949, in respect of houses completed after February 28, 1952. Notes on the sections of the new Act are given in the appendix to the circular and are set out in full below:—

Section 1, *subsection* (1) by amendment of the Housing (Financial and Miscellaneous Provisions) Act, 1946, provides for increases in the Exchequer contributions and the annual rate fund contributions in respect of houses and flats completed after February 28, 1952.

Paragraph (*a*) increases the general standard amount of annual Exchequer contributions from £16 10s. to £26 14s.

Paragraph (*b*) increases the special standard amount of annual Exchequer contributions in respect of houses provided for the agricultural population from £25 10s. to £35 14s. Payment of the contribution is made discretionary and is intended to assist in meeting the extra cost of providing houses in small groups in isolated areas.

Paragraph (*c*) increases the normal amount of annual rate fund contributions from £5 10s. to £8 18s.

Paragraph (*d*) increases the normal amount of annual rate fund contributions and county council contributions from £1 10s. to £2 10s. where the special standard amount of annual Exchequer contributions of £35 14s. is paid.

Paragraph (*e*) substitutes the increased amounts set out in Parts I and II of the Schedule to the Act for the amounts of the Exchequer contributions and annual rate fund contributions in respect of flats on expensive sites set out in Parts II and III of the First Schedule to the Act of 1946.

Section 1, *subsection* (2) increases from £1 4s. to £2 5s. the amount by which the general standard amount of annual Exchequer contributions is increased under Section 38 of the Act of 1949 for houses on expensive sites. In consequence the amount of the additional annual rate fund contributions is automatically increased from 8s. to 15s.

Section 1, *subsection* (3) makes the minimum annual credit to the Housing Repairs Account £8 a house instead of £4.

Section 2, *subsection* (1) repeals subsection (3) of Section 13 of the Act of 1946, which precluded payment of Exchequer contributions under Section 3 of the Housing (Financial Provisions) Act, 1938, in respect of houses provided by private persons for members of the agricultural population for any year in which they have been occupied as "tied" cottages—that is to say, occupied in pursuance of a contract of service. Exchequer contributions will be payable in respect of the financial year ending March 31, 1953, for houses so provided, if any such occupation would have been the only bar to payment.

Section 2, *subsection* (2) amends paragraph (*b*) subsection (1) of Section 23 of the Act of 1949, so that it no longer precludes the making of an improvement grant for a "tied" cottage or makes the appropriate proportion of an improvement grant, whether already made or made hereafter, repayable to the local authority by the recipient of the grant, if the cottage is at any time occupied by a member of the agricultural population in pursuance of a contract of service.

Section 2, *subsections* (3), (4) and (5) add to the conditions subject to which (*a*) Exchequer contributions are payable under Section 3 of the Act of 1938 and (*b*) improvement grant may be retained, the further condition that the occupier of a cottage in pursuance of a contract of service shall be allowed to continue in occupation for a month after notice determining the contract is given, or after the contract is determined otherwise than by notice. This condition does not apply if the employee himself gives notice or leaves without notice but does apply, if he dies, in favour of residents with him in the cottage at the time. If this condition is broken, subsidy under the Act of 1938 will cease to be payable or the appropriate proportion of the improvement grant will become repayable.

Sale of Council Houses

Section 3 by amendment of Section 79 of the Housing Act, 1936, and by other provisions, dealt with in detail in Circular No. 64/52, facilitates the sale of houses by local authorities and regulates the price at which a house sold by a local authority may be re-sold and the rent at which it may be let. Subsection (5) amends Section 86 of the Act of 1936 so as to enable the Minister to suspend or discontinue the payment of Exchequer contributions in respect of a house which is sold or let on a long lease.

Section 4 makes provision for the enforcement of conditions imposed by a local authority on the sale of a house as to the price at which it may be re-sold and the rent at which it may be let. It applies for this purpose Section 7 and certain other provisions of the Building Materials and Housing Act, 1945, as amended by Section 43 of the Housing Act, 1949, relating to houses built under licence. Subsection (3) requires registration by the proper officer in the register of local land charges of any conditions imposed by the local authority for limiting the price at which a house sold may be re-sold and the rent at which it may be let, and reserving rights of pre-emption.

Section 5 gives express power to a local authority to acquire land for the purposes of Section 80 of the Housing Act, 1936, or Section 7 of the Housing Act, 1949, whether or not that land forms part of a site on which houses are to be built. This removes any doubt about the power to acquire additional land for shops, recreation grounds, etc., for the benefit of the tenants of housing estates which have already been completely developed.

Section 6 authorises increased Exchequer Equalisation Grants under the Local Government Act, 1948, in respect of the increased rate contributions required under the Act.

Section 7 is the interpretation section.

The Schedule sets out in tabular form, in Part I, the rates of contributions for flats on expensive sites and in Part II the rates of contributions for flats of four or more storeys with lifts. The Schedule includes also a table of statutes referred to in the Act.

SALE OF COUNCIL HOUSES

Minister Gives General Consent

MR. HAROLD MACMILLAN, Minister of Housing and Local Government, has given general consent to all local authorities in England and Wales to sell any of their council houses subject to certain conditions. This consent is contained in a circular which explains in detail the powers which councils now have to sell council houses and to build houses for sale.

The circular (64/52) points out that while the Government have made clear their general policy to encourage house ownership, it is for each local authority to decide whether or not it wishes to sell its houses. The Minister, however, wishes to ensure that where an applicant wants to buy and the local authority wants to sell an agreement for sale should not be frustrated by any difficulty in obtaining his consent.

Subject to the conditions laid down in the circular (set out below) local authorities now have discretion to sell occupied houses to the sitting tenants. The circular also gives them discretion to sell houses which are unoccupied, or have not previously been let, provided that they go to persons in need of homes. It is for each local authority to decide whether or not to sell any of its houses and, if so, how many.

No local authority can force its tenants to buy, but tenants have an opportunity of buying the houses in which they are living if they wish to do so and if the council is willing to sell.

The Housing Act, 1952, which received the Royal Assent on August 1 and which is explained in detail to local authorities in another circular enables the Minister to require that certain conditions shall be imposed by the local authority before giving his consent to sale.

The Minister has, therefore, in giving his general consent to the sale of council houses, laid down the following general conditions: *Price*—1. In the case of a house completed on or before May 8, 1945, the sale price is to be not less than twenty times the net annual rent exclusive of rates, water charges, etc. 2. In the case of a house built after May 8, 1945, the sale price is to be not less than the total cost to the authority of providing the house.

Conditions of sale—1. For five years from the date of sale the house is not to be let at a higher rent than that fixed by the local authority, nor is it to be resold at a higher price than that at which it was bought, subject to allowance for improvements or depreciation. 2. An owner who wishes to resell the house must first offer it to the local authority at the price at which it was bought, subject to allowance for improvements or depreciation.

In the same circular the Minister also gives his general consent to local authorities to exercise their powers of leasing council houses for a term of 99 years or longer. The general conditions are similar to those for the sale by the council of a freehold property, except that the minimum price is adjusted to allow for the proposed ground rent.

Local authorities are reminded in the circular of their powers under the Housing Acts to agree to payments for a sale or for the granting of a lease being made by instalments, or to a payment being secured by a mortgage.

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Messrs. City of London Real Property Co., Ltd.

27,000 ft. sup. 1" Oak block flooring.
New Offices, Vauxhall Motors Ltd., Luton, Beds.
Messrs. Howard, Souster & Partners F./A.R.I.B.A.

20,000 ft. sup. 1" Oak block flooring.
New Offices, Frigidaire Co., Ltd., Hendon
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18,000 ft. sup. 1" Oak block flooring
A.C. Sparking Plug Offices, Dunstable.
Messrs. Howard, Souster & Partners, F./A.R.I.B.A.

45,000 ft. sup. 1" Oak block flooring.
Ministry of Labour Head Office, St. James Square, S.W.1
Messrs. Robert Angell & Curtis, Architects.

40,000 ft. sup. 1" Teak block flooring.
Sunderland House, Curzon St., London, W.1
T. Braddock, Esq., F.R.I.B.A.

17,000 ft. sup. ¾" Oak parquet flooring.
Indian Government Offices, South Audley Street, S.W.1
T. Braddock, Esq., F.R.I.B.A.

14,000 ft. sup. 1" Teak block flooring.
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T. Braddock, Esq., F.R.I.B.A.

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T. Braddock, Esq., F.R.I.B.A.

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Messrs. Elliott, Cox & Partners, Architects

20,000 ft. sup. 1" Teak strip flooring
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Dance Floor for B.B.C., Bush House, Aldwych, W.C.2
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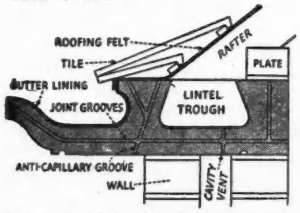

This sectional drawing shows the system in detail and illustrates the ways in which FINLOCK saves approx. 5 yards of brickwork, 80 ft. of rafter, 40 ft. of normal guttering, 40 ft. of fascia, 40 ft. of soffit and 80 ft. super of roof tiling per single house. Painting is eliminated and a reduction in down pipes and drainage is obtained. The complete eaves for a building, with all fittings, can be fixed in one day.
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✻ *The buildings shown are in accordance with the winning design in the £1,000 low cost housing competition organised by "THE BUILDER." By courtesy of J. L. Womersley, Esq., A.R.I.B.A., A.M.T.P.I., Borough Architect for Northampton.*

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STEEL ECONOMY

M.o.W. Bulletin No. 1

RECOMMENDATIONS intended to secure the maximum efficiency from the steel used in the design of buildings are contained in Steel Economy Bulletin No. 1 (The Design of Buildings) issued by the Ministry of Works and published by H.M.S.O., price 3d. net. Prepared jointly by the Ministry of Works, the Ministry of Supply, D.S.I.R. (Building Research Station) and the Service Departments, with two or three exceptions the recommendations it contains are in accordance with B.S.S. 449 and the relevant Codes of Practice. It is hoped that Local Authorities will have full regard to the recommendations when approving designs under the bye-laws.

Following are extracts from the Bulletin.

THE DESIGN OF BUILDINGS

DESIGN OF FRAMED BUILDINGS GENERALLY: 1. Every effort should be made, especially by early consultation between the architect and the engineer, to avoid uneconomical layouts involving long spans, etc. In single-storey factory buildings, roof spans should be no longer than is necessary to provide the essential minimum clear floor area. The weight of steel needed per square foot of floor area covered in this type of building rises considerably with the length of the spans. Multi-storey framed buildings should, as far as possible, be planned to a regular grid, thereby standardising dimensions. Standardisation of complete structures, when practicable, may also allow economies to be made by more careful design.

2. Care should be taken to adopt grid dimensions using spans of the most economical length—that is to say of such a length that the best compromise is made between the requirement to keep beams short and the requirement to keep the number of vertical supports to a minimum. In this connection, however, foundation problems should be borne in mind.

3. Adequate depth should be allowed for slabs and beams, as the arbitrary restriction of floor thicknesses results in unnecessarily heavy reinforcement or steel sections.

DESIGN OF STEEL STRUCTURES: *Design Principles*: 4. Full advantage should be taken of the principle of continuous and interdependent construction including semi-rigid and fully-rigid design.

5. Beams and other members are often heavier than necessary in order to achieve a specified degree of stiffness. When increased deflections can be accepted without impairing the appearance or efficiency of the structure such members should be designed by stress criteria only.

6. Where stanchions and beams are solidly encased in structural concrete they should be specifically designed, by an extension of the principles already permitted by B.S. 449 and C.P. 113, to act as composite sections.

7. Steel grillages for stanchion foundations should be avoided in favour of mass concrete or reinforced concrete foundations.

8. Economies can often be effected in detail by paying careful attention to such things as the minimum pitch of bolts or rivets and the consequent reduction of gusset sizes; the curtailment of flange plates and the employment of simple shop-welded caps and bases; and the elimination as far as possible, of all members not assisting in the load-carrying capacity of the structure.

9. Sectional shapes in which the full primary resistance cannot be developed without secondary stress allowances should be avoided where possible: for example, an unequal angle with the shorter leg connected.

10. In large structures, consideration should be given to the possibility of using the principle of pre-stressing to reduce secondary effects. In some cases, also, savings may be made in a main tension boom by prestressing with auxiliary high tensile wires.

11. Vierendeel construction is sometimes favoured because of its tidy appearance. It is wasteful in steel and should be avoided in favour of braced frames.

Materials and Methods: 12. The use of high tensile steels to B.S. 548 and B.S. 968, as permitted by B.S. 449 and C.P. 113, can lead to important savings in steel, particularly in beams.

13. Tubular members give a very considerable steel saving by comparison with normal hot rolled members for braced frames, and should be used wherever practicable.

14. The use of open webbed beams and stanchions of the castellated or other welded types can lead to a very considerable saving of steel in the framework of a building.

15. Cold-formed members also show a substantial saving over hot rolled members for light frameworks, especially in standardised construction of moderate dimensions; but special attention should be paid to protection from corrosion.

16. Welding can lead to considerable economies, and should be used wherever possible.

17. Filler joist floors should not be used unless unavoidable. If it is necessary to use them, they should be designed as composite construction, and this may be done even in cases where the fillers are not completely embedded. Continuous shelf angles should not be used.

REINFORCED CONCRETE DESIGN: 18. The use of high-tensile or cold worked steel at stresses of 50 per cent. above those allowable for mild steel is permitted by Code of Practice 114, and the substitution of such steel for mild steel in beams can be made without modification of the concrete section.

19. Stresses higher than those given in C.P. 114 are often justifiable. In the hands of experienced designers a tensile stress of 20,000 lb. per sq. in. is reasonable for mild steel bars and up to 30,000 lb. per sq. in. for cold worked bars. Where deformed bars are shown to have a specially good bond, still greater stresses could be allowed for high tensile steel, provided that due care is taken to avoid gross cracking of the concrete by careful attention to detailed design and by the avoidance of single-intersection shear systems.

20. In normal reinforced concrete the principle of continuous construction should be used where rigid foundations are assured.

21. Very considerable economies in the use both of steel and cement can be obtained by using pre-stressed concrete in all suitable cases.

22. Some steel economy may be possible by the use of higher strength in concrete in columns.

LOADING: 23. The position and construction of internal partitions should be ascertained and the structure should be designed to carry their computed weight. This may be more economical than using the general allowances for partitions set out in paragraph 5 of B.S. 449.

24. The maximum use should be made of lightweight construction for internal partitions, roof, etc., in order to reduce dead weight.

ASSISTANCE OF WALL PANELS AND FLOOR SLABS: 25. Account should be taken of the structural assistance given by wall panels and floor slabs in framed buildings by using them instead of bracing or portal action for the purpose of resisting racking forces. In many cases the provision of X- or K-bracing can thus be eliminated.

SUBSTITUTION OF OTHER MATERIALS FOR STEEL: 26. Factors other than the amount of steel involved may have to be taken into account in considering any particular design problem. Full consideration should always be given, however, to the recommendations which follow.

Single-storey and Shed Type Buildings: 27. Reinforced concrete and pre-stressed concrete should be used as much as possible for roof spans, etc.

28. Load-bearing brickwork or stone should be used for vertical supports where practicable, and consideration should be given to a departure from the conventional practice of limiting the resultant thrust to the middle third of the section and to a closer approach to the safe working strength of the brickwork or masonry in compression. Where brickwork or stone is not practicable, concrete (reinforced if necessary) should be used for vertical supports where possible.

29. The use of corrugated steel sheeting should be avoided.

Multi-storey Buildings: 30. Consideration should be given to the saving in steel that can be obtained by the use of load bearing walls and piers in buildings of moderate height (up to four storeys).

31. Where a framed building is necessary consideration should be given to the use of reinforced concrete construction rather than steel framing.

32. Pre-stressed concrete should be used wherever possible for floor slabs and beams.

FURTHER POINTS ON SUBSTITUTES: *Towers and Gantries*: 33. Reinforced concrete should be used for gantries wherever possible, and brick or stone is often appropriate for the supports.

34. Towers for elevated tanks should be constructed in brick or stonework or lightly reinforced concrete, wherever the degree of permanence justifies it.

35. Tall chimneys founded on the ground should be in brickwork rather than steel or reinforced concrete wherever the degree of permanence and the urgency of the work allows.

Foundations and Retaining Walls: 36. Mass concrete, brickwork or stonework should be considered for retaining walls rather than reinforced concrete.

37. Foundation slabs should generally be thick and of a simple design in order to use the minimum amount of reinforcement.

38. Pre-stressed concrete piles should be used rather than reinforced concrete where suitable.

39. Reinforced concrete or pre-stressed concrete sheet piling should be used rather than steel for permanent work where only a moderate penetration is required.

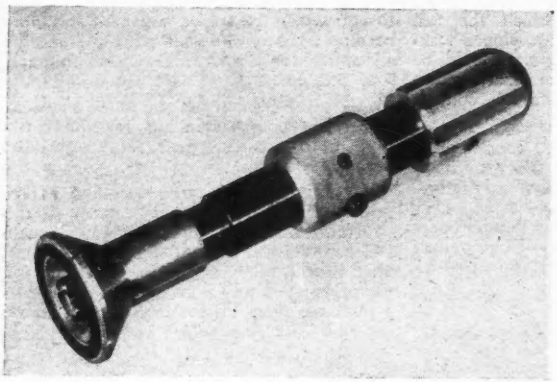

Fig. 1.—A gun now available in this country. Supplied with alternative barrels 0.38 in. or 0.22 in. calibre.

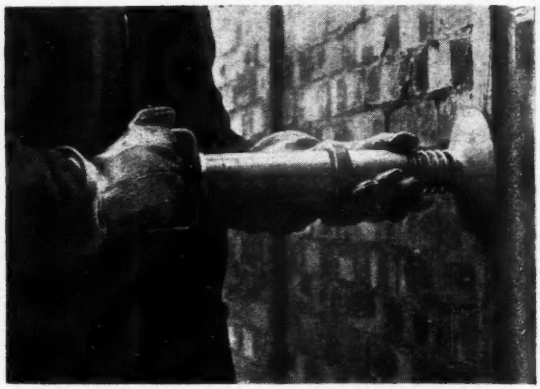

Fig. 3.—A 0.38 in. calibre gun shown in use for fixing a batten to a wall.

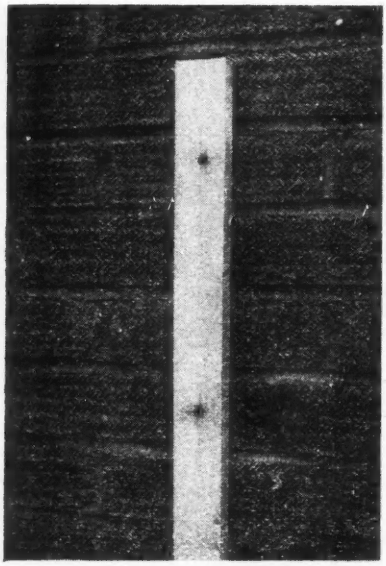

Fig. 2.—A 2 in. by 1 in. timber batten fixed to a brick wall by Type H.91 pins fired from 0.22 in. calibre gun.

EXPLOSIVELY-ACTUATED FASTENING TOOLS

Their Application in the Building Industry

By K. G. H. FRYER, M.I.Mech.E.

TOOLS such as that shown in Fig. 1 are now available and coming into use in this country, being variously described as rivet guns or pin and stud firing guns. These guns are known to have been in fairly wide-spread use in the U.S.A. for a number of years, and there are to-day at least six makes on the American market. Further evidence of their use is supplied by the Productivity Team on Building, which visited America in 1949 under the aegis of the Anglo-American Council on Productivity. In their report published in May, 1950, these guns are described as important time-savers, and many instances are given of the uses to which they are put. The team considered them particularly useful for anchoring metal lathing and electrical junction boxes, fixing metal partitions, attaching timber bearers to steel joists, fixing air-conditioning plant and equipment, and similar tasks requiring the fastening of metal or wooden objects to walls, floors or ceilings, whether they be of concrete, brickwork or steel.

Many of these operations occur frequently when building. Normally, if fixings have to be made to materials such as brick, concrete and steel, the traditional method would be either to punch or drill a hole and then to plug or tap it and drive or fit a screw, the time and labour expended on such jobs depending on the nature of the material, and the availability of electric or pneumatic hand tools. If, therefore, these operations can be simplified as, for instance, by fastening a wooden batten, see Fig. 2, to a brick wall in much the same way as a batten is nailed to a breeze wall, clearly an appreciable saving in time and labour is made possible. The saving would be still more substantial where neither electric nor pneumatic power is available on the site.

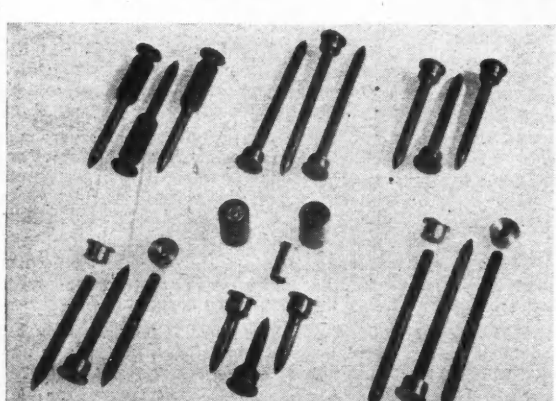

Fig. 4.—Pins, studs, driver heads, cartridges and breech plug for 0.38 in. calibre gun.

Applications and Method of Use

The object of this article is to make an assessment of the economic value, of the method of operating, and of the mechanical principles and safety-in-use of this type of tool. It is based on the factual data obtained as a result of the testing of two American guns, which were acquired by the Building Research Station.

It should, perhaps, be mentioned that the

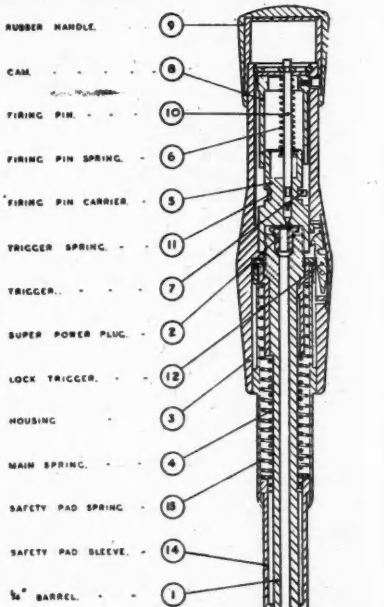

Fig. 5.—Section through 0.22 in. calibre gun.

TABLE I

RESULTS OF TESTS CARRIED OUT WITH 0.38 IN. CALIBRE GUN

Nature of fixing	*Type of cartridge used*	*Pin or stud used. For detail see Fig. 7*	*Result*	*Force required for extraction*
Into concrete 1 : 2 : 4 mix ⅜ in. aggregate	Heavy charge	M.S. 37	Penetration 2⅛ in. Stud firm. Slight flaking of concrete around point of penetration	Not tested
Ditto	Ditto	M.S. 35	Penetration 2⅛ in. Slight flaking around point of penetration	6,000 lb.
Into concrete 1 : 2 : 4 mix ⅜ in. aggregate	Medium	M.S. 29	Penetration 1.11/16 in. Stud driven firmly up to shoulder of thread. Slight chipping of concrete around point of entry	2,400 lb.
A standard malleable iron electric junction box to 4½ in. brick wall See Fig. 9	Light	M.K.F. 15	The box, which had not been previously drilled to take the pin, was firmly fixed	Not tested
Into 9 in. brickwork Fletton bricks	Medium	M.S. 37	Bricks chipped at surface but not split	2,400 lb.
2 in. by 1 in. deal batten to concrete wall 12 ins. thick. Mix 1 : 6 1½ in. "all in" aggregate	Light	M.K. 25	The head of the pin was flush with the surface of the wood	Not tested
2 in. by 1 in. deal batten to concrete slab. Mix 1 : 2 : 4 ⅜ in. aggregate	Light	M.K. 25	Head of pin remained standing ¼ in. above surface of batten	1,700 lb.
¼ in. thick mild steel to 6 in. by 6 in. timber beam	Heavy	M.K. 35	The pin was driven through the plate into the timber. The fixing was satisfactory	Not tested
Standard malleable iron electric junction box to web of 6 in. by 3 in. R.S. joist See Fig. 10	Medium	M.K.F. 15	The box was firmly and satisfactorily fixed	Not tested
Pin driven into ⅜ in. thick M.S. plate	Heavy	M.K. 35	Depth of penetration 9/16 in.	2,100 lb.

TABLE II

RESULTS OF TESTS CARRIED OUT WITH 0.22 IN. CALIBRE GUN

Nature of fixing	*Power plug used "Super" "Hi" "Med" "Lo"*	*Stud used. For detail see Fig. 8*	*Result*	*Force required for extraction*
Into concrete 1 : 2 : 3 mix ⅜ in. aggregate	Super	H. 95	The pin penetrated 1⅛ in. Concrete slightly chipped	4,000 lb.
Into concrete 1 : 2 : 4 mix ¾ in. aggregate. Cube strength 5,800 lb. per sq. in.	Super	H. 93	The pin penetrated 1⅛ in.	2,700 lb.
Standard malleable iron electric junction box to 12 in. thick concrete wall. 1 : 6 mix 1½ in. aggregate See Fig. 11	Super	K. 54	The box was firmly held to the wall, the head of pin protruding 3/16 in. into box	Not tested
Into brickwork Common brick	Super Hi Med	H. 95	2⅛ in. penetration 1½ in. penetration 1⅛ in. penetration	4,500 lb. 3,400 lb. 2,700 lb.
2 in. by 1 in. deal batten to concrete. Cube strength 4,800 lb. per sq. in. Aggregate ¾ in. granite chips	Super	K. 54	The head of the pin was ⅛ in. below the surface of the wood. A secure fixing was made	Not tested
2 in. by 1 in. deal batten to concrete. Cube strength 5,400 lb. per sq. in. Aggregate ¾ in. limestone chips	Hi	K. 54	The head of the pin came to rest just below the surface of the wood. A secure fixing was made	Not tested
2 in. by 1 in. deal batten to 4½ in. brick walls. Fletton brick See Fig. 2	Hi	H. 93	The head of the pin stopped just below the surface of the wood. A secure fixing was made	Not tested
Standard malleable iron electric junction box to 4½ in. brick wall Fletton brick	Super	K. 52	The junction box was firmly and effectively fixed to the wall	Not tested
Two M.S. plates each ¼ in. thick joined together	Super	H. 91	Two pins were driven into the plates. The heads were partly buried in the top plate	*

principle of utilising an explosive charge for the driving of bolts and rivets or the punching of holes in steel is not new. The first patent in this country was filed in 1910, from which the Cox submarine gun was developed. This tool, as its names implies, is generally used by divers under water, for effecting repair to damaged ships by the rapid fixing of steel plates. As can be imagined, this is a heavy and powerful tool, far too large for general use as a hand tool, although occasionally used on steel structural work. It has been tried for making a fixing to concrete, but without success, as shattering generally occurs.

In spite of the original patents having been taken out in this country, the small self-contained hand tool we know to-day has been developed primarily in the U.S.A., and only in the last year or two have firms in Switzerland and Germany followed this lead. Moreover, it is only in the last few months that these guns have appeared on the British market, and, as far as it is known, only some 500, of either German or Swiss origin, are in use here.

In addition to the two American models, which were subjected to comprehensive examination and test, five other guns have been examined, of these, two were of American, two of Swiss and one of German manufacture.

Basically, these guns differ little in design, all following the principle established in the original patents, which have now expired. In detail, however, there are considerable variations between them, many of which are covered by recent patents. These relate mainly to the means of regulating the driving power, loading, extraction of spent cartridges, and the size, shape or formation of the pin or stud. All the guns that have been examined have smooth bores.

The two American guns tested were of the same make but of different size. Fig. 3 shows the larger model, which weighs 10 lb. and fires a 0.38-in. calibre cartridge, driving a pin or stud having a 0.25-in. diameter shank. With this gun the depth of penetration, to suit various materials, is regulated by loading one of four alternative cartridges, each having a different strength of charge. Fig. 4 shows the various types of pin or stud for use with the 0.38-in. calibre gun.

The smaller model, weighing about 5 lb., shown as a sectional view in Fig. 5, fires a 0.22-in. calibre cartridge, driving a pin or stud having a 0.16-in. diameter shank. A different means, however, is employed for regulating the depth of penetration with the smaller gun. Unlike the larger model, cartridges of uniform charge only are required, and the driving force imparted to the pin of stud, and hence the depth of penetration, is regulated by using one of four alternative fittings known as "power plugs." These are, in effect, tubes which can be dropped into the breach end of the barrel, and act as spacers between the cartridge and the projectile, or in other words, determine the volume of the combustion chamber. Thus, by increasing the distance between the cartridge and projectile, greater expansion for the explosion is available and consequently the driving force is reduced, and vice-versa. With this model a still finer regulation of depth of penetration than is afforded by the four power plugs can be obtained by means of an adjustable rod. This, together with the power plugs and range of pins and studs, can be seen in Fig. 6. By using this gauge in conjunction with the shortest plug any intermediate position of the projectile in relation to the cartridge can be obtained either outside or between the positions governed by the power plugs.

Results of Tests

In comparing the relative performance of the two guns, the data obtained from tests

* A shearing force of 2,600 lb. was required to separate the plates. The pins pulled out of the bottom plate.

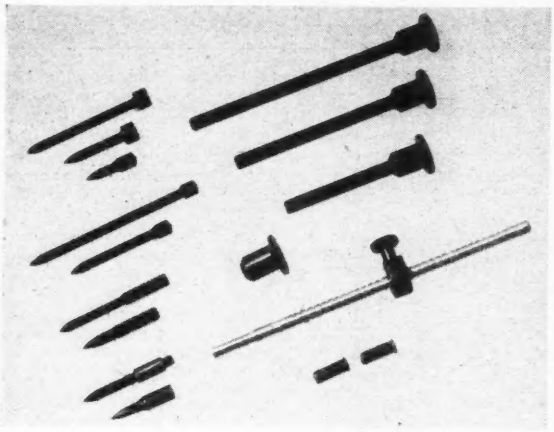

Fig. 6.—Studs, "power plugs," gauge rod and cartridge for 0.22 in. calibre gun.

with each under similar conditions have been analysed. In all, 53 tests for making fixings in a variety of materials, and 21 tests to determine the force required to extract the pins or studs, were carried out with the two guns. From these a number of average results which are considered to be representative have been selected and can be followed by referring to Tables I and II.

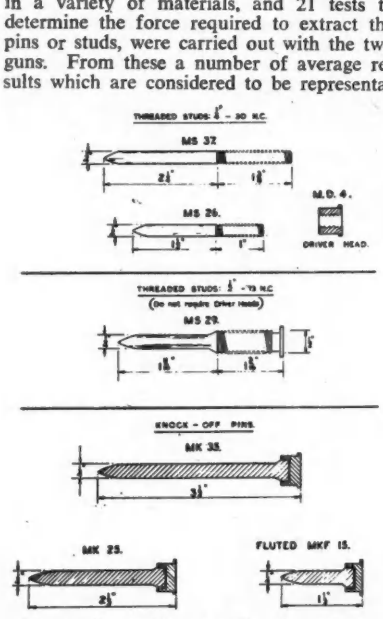

Fig. 7.—Key to pins and studs referred to in Table No. I.

These tests indicate that this type of tool can be usefully and reliably employed on a wide range of work typical of or similar to the examples given. The tests, however, showed that there are certain applications for which these guns are not suitable. It is not possible in this paper to discuss all the varied conditions under which these tools may or may not be used. It must suffice, therefore, to indicate some unsuitable materials into which, or through which, the firing of pins or studs should not be attempted, and occasions when the gun should be used with more than usual discretion.

Generally, they should not be used for making fixtures to brittle materials such as cast iron, glass, marble, ceramic tiles, hollow clay blocks or cored concrete blocks with thin walls, nor should they be used with any materials not having sufficient stopping power or combined stopping power to prevent the projectile passing through, such as breeze or foamed slag walls or blocks, lath and plaster or plasterboard walls. No fixing should generally be made within at least two inches of the edge of brickwork or concrete, and therefore care should be taken when fixing metal window frames. Care must also be taken if a gun is used for fixing corrugated iron or asbestos cement sheeting to angle iron roof purlins or the like. Under such conditions the operator must satisfy himself that no one is standing underneath, and also that the pin is being fired squarely into the metal to which the fixing is being made, to avoid ricochets.

Throughout the tests the indication was that better penetration and holding power were obtained with the stronger concretes. A possible explanation is that the stronger mortar restricts a tendency for the relatively harder particles of aggregate to deflect the projectile, thereby preventing them from becoming bent with consequent shattering of the concrete. On the other hand, variations in size between ⅜-in. and ¼-in., and in the nature and hardness of the aggregates appeared to have little effect.

Occasional difficulty was experienced in making a good fixing to the soffit of a concrete roof or floor; this may be attributed to the difficulty the operator has in ensuring the gun is perpendicular to the surface while he is exerting the necessary pressure to fire.

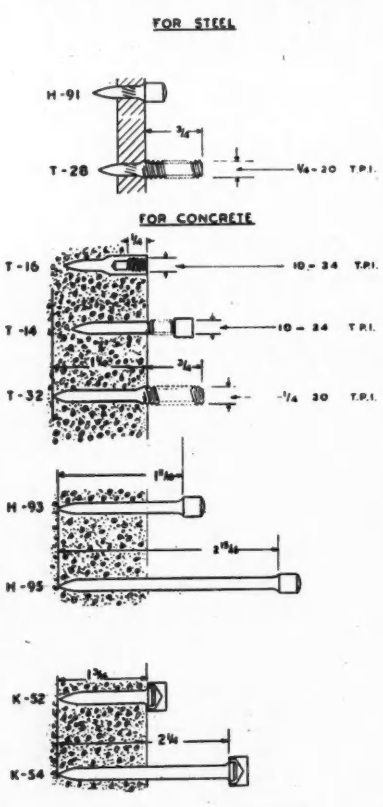

Fig. 8.—Key to pins and studs referred to in Table No. II.

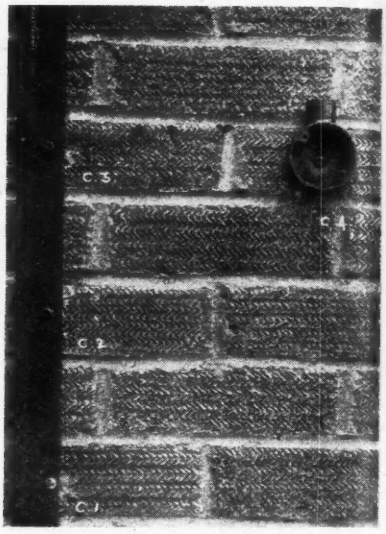

Fig. 9.—On right, standard electric junction box fixed to brickwork by MKF.15 pin. On left, R.S. angle fixed to brickwork. Both with 0.38 in. calibre gun.

Safety

Apart from some danger that may attend the firing into unsuitable materials, or the omission to take ordinary precautions dictated by common sense, the guns that have so far been examined are quite safe to handle. They cannot be fired freely into the air like a firearm, because in all those examined there are at least two safety features. These features, although distinct, are associated in their action. In all the guns examined one feature is common; namely, the muzzle must be pressed against a firm object which can offer a minimum resistance to pressure of about 20 lb., which is the force required to telescope the barrel into the body and fulfil one condition for firing the gun. However, another safety device, either in the form of a spring-loaded press button or spring-loaded twist ring or grip, must be actuated before the firing pin can be cocked and released and the gun be fired. This, unlike a safety catch on a firearm which can be set to "safe" or "fire," is automatically returned to the safe position by spring when hand pressure is released. It will be appreciated, therefore, that there is practically no risk of a loaded gun going off if dropped accidentally, even muzzle downwards.

Provided the cartridge containing the propellant charge and the projectile are separate units, as is usual with these guns, they may be used without any restrictions under the Firearms Act, no Firearms Licence being necessary; nor is it necessary for a user to register his premises under the Explosives Act for the storage of ammunition. Vendors of these tools need not be registered firearms dealers, but they are not exempted from registering their premises under the Explosives Act for the storage of the blank cartridges. As far as can be ascertained there is no restriction to their use imposed by the Building Regulations.

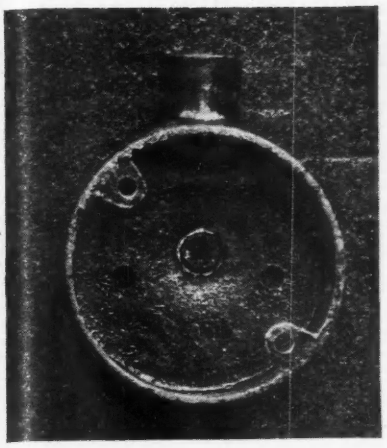

Fig. 10.—Electric junction box fixed to 6 in. by 3 in. R.S. joist by MKF.15 pin fired from 0.38 in. calibre gun.

It is important that the pins and studs should be of correct size, and made of the correct alloy steel suitably heat treated. Alloy steels conforming to British Standard 970—1947 E.N.16 for the small diameter pins and studs and E.N.18 or 19 for those of larger diameter are considered suitable. The quenching temperatures for these steels are given in the relevant specifications, but a tempering temperature of 200 degrees C should not be exceeded. This information is given in order to emphasise that it would be unwise to use projectiles made from mild steel or other unsuitable material. Cartridges should be obtained only from the gun manufacturers or their agents, and no attempt should be made to use any other type, or improvised ammunition.

Cost

The prices of the guns now available in this country, complete in cases with their ancillary equipment, and the prices for the projectiles and cartridges, are probably not yet stabilised. It is only possible, therefore, to indicate on very broad lines the costs for making fixings with these tools and in the same way to compare the economics of the use of these guns with traditional methods.

Consideration of costs will be confined to the 0.22-in. calibre size, which will very probably have the widest appeal, although one of the guns now on sale in Great Britain has interchangeable barrels of 0.22 in. and 0.38-in. calibre.

It may be assumed the average capital cost of a gun and equipment is about £30. The life of a gun and the maintenance costs are not known, but are thought to be comparable with those of any firearm of equivalent calibre, and the life should be not less than ten years. In any case, the capital cost is a negligible factor if a large number of fastenings are to be made, and might well be ignored in assessing cost in use. The price of a 0.22-in. calibre blank cartridge, specially filled with the correct charge, is assumed to be 2d. each at the present time, but may well come down if the demand increases. The American prices for the pins and studs for the 0.22-in. calibre gun which was tested, ranged from approximately 9d. to 1s. 2½d. each. Compared with British prices, these are considered high, and estimates have been obtained for the supply of studs and pins made from alloy steels conforming to British Standards, which, if manufactured in sufficient quantities, should range from about 3d. to 10d. each, depending on the type. From time studies made, it has been estimated that the average time cycle for an operator firing and reloading is 1.5 minutes or at a rate of approximately 40 shots per hour under straightforward conditions. Therefore, assuming the operator's wage rate is 3s. 6d. per hour, the costs for making fixings should be within the range of 6d.-1s. 1d. It is thought that these costs should eventually be reduced when production of the projectiles and cartridges has got well under way.

It is difficult to make any comparison with traditional costs for making similar fixings, as there are so many variables to take into consideration. However, from an estimate based on time studies, it would take a craftsman six minutes to make a hole manually in brickwork and fit a wooden plug. This does not include the additional time involved in screwing or nailing the object to be fastened to the wall, nor for procuring or making the appropriate size of plug. If time only is allowed for, the cost would be 5d. per hole, but it would be reasonable to allow 6d. for the whole operation. Without the aid of electric or pneumatic power, to perform a similar operation in concrete would increase the cost by at least 20 per cent. and even by as much as 100 per cent. in concrete of high strength. For another case, an estimate has been made, also based on time studies, of the cost of fitting a steel stud with a ¼ in. Whitworth thread to a rolled steel stanchion. If a portable electric hand drill is used, the time required for drilling and tapping is four minutes, which, including the cost of the stud, amounts to 6d.

The figures quoted above are only approximations, and they have been used only to offer some basis for comparison of the relative costs between traditional and gun methods. It is fairly clear that by using the gun method the production rate is considerably increased with low expenditure of labour, whereas the material costs tend to be high. Generally with traditional methods the reverse is the case. As an example, a hypothetical case is taken where it is required to attach, say, ten 8-ft. by 2-in. by ½-in. timber battens to a brick wall, each batten to be secured at four points, thus making a total of 40 fixings. If the work were to be done by traditional manual means, assuming six minutes per hole, without the assistance of power tools, the material and labour cost of making the 40 fastenings would be in the order of 20s. At least 16s. 8d. would be in respect of labour, and the work content *four man-hours*. If the wall were made of concrete these figures would be somewhat higher. If, however, the 40 fixings were made by gun, the total cost might be 20s. 2d., assuming 16s. 8d. in respect of material and 3s. 6d. for labour; the latter amounts to *one man-hour*, and moreover with the gun the costs would be approximately the same irrespective of the material to which the fixing is made.

Conclusions

From the study that has been made of these tools, it is possible to draw the following conclusions:—

First, that these guns can be considered useful self-contained hand tools, capable of being operated easily, quickly, safely and economically under a wide range of conditions.

Secondly, that, when used in a new application, trial shots must usually be fired in order to determine the right projectile and propellant charge to use. In some cases it may be necessary also to test the holding power of the fastenings. In deciding these questions it is only the experienced operator who will quickly reach a decision. There is little doubt that experience and intelligence are most desirable adjuncts needed by an operator. There is an analogy here in traditional work, where the craftsman, guided by his experience and knowledge, chooses a screw or stud suitable for the purpose and then bores the hole of the appropriate size and depth. Once an operator has established the technique for making fastenings under varied conditions with different materials, the time and labour that can be saved should be considerable.

In defining the safety precautions that should be taken, it is probably the best policy to regard these tools as firearms; therefore, they should never be left loaded, or pointed at anyone. The recoil is slight and the report emitted on firing is no louder

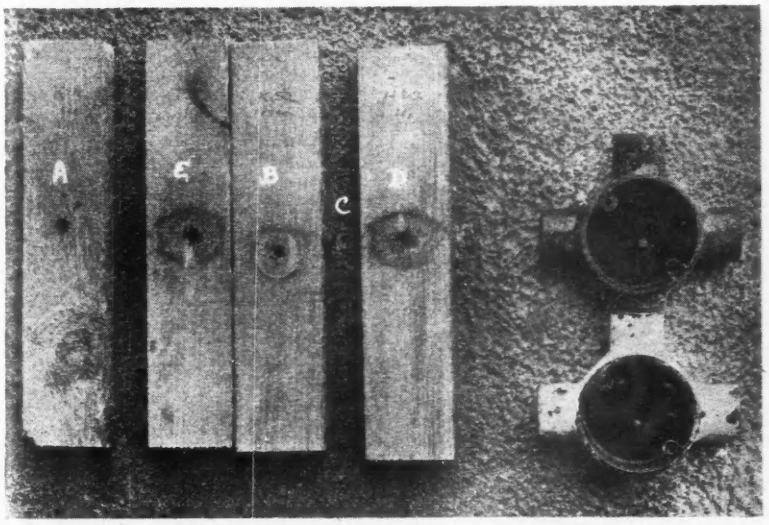

Fig. 11.—Right, two electric junction boxes fixed to concrete wall by K.54 pin fired from 0.22 in. ca libre gun. Left, timber ¾ in. thick fixed to concrete by 0.22 in. calibre gun.

than with any firearm of equivalent calibre, and neither feature could be injurious to an operator. The safety pads, shields and goggles usually supplied with the equipment should be used, as they provide effective protection to the operator and others from possible splinters and dust. No amount of supervision can guard against all eventualities, and it is only the trained and intelligent operator who will anticipate possible danger, and avoid firing into unsuitable materials or those with too low resistance.

"No Panacea"

Lastly, it would be unwise to assume that explosive fasteners are a panacea for all work of this nature; for, by using the latest types of power hand drilling machines together with special drills and plugs, most satisfactory fixings can be made to masonry, concrete and brickwork cheaply and, in comparison with manual methods, quickly. The same applies to electric welding guns used for fixing studs to steelwork. Although both methods require an extraneous source of power supply and their functions are not interchangeable, there will be in many circumstances a demand for such equipment.

It is, however, in the ability to make fixings to concrete, steel or brickwork with one and the same self-contained hand tool that the very great advantage of the explosive method of fastening at once becomes apparent. This asset is still further emphasised under those conditions where neither electricity nor compressed air supplies are available.

The work described has been carried out as part of the research programme of the Building Research Board of the Department of Scientific and Industrial Research and this paper is published by permission of the Director of Building Research.

SITES FOR HOUSE-BUILDING

Minister's Advice to Local Authorities

MR. HAROLD MACMILLAN, Minister of Housing and Local Government, has sent a circular (65/1952) to local authorities, asking them to make sure that sites for the next three years' house-building programme are agreed upon in good time. He suggests that local authorities and planning authorities should jointly review available sites, and that local authorities should tell Principal Regional Officers of the Ministry as soon as possible the results of this review and warn them of any difficulties likely to arise.

In a memorandum accompanying the circular, details are given of the consultations which have to take place before planning permission can be given, and stress is laid on the importance of avoiding encroachment on good agricultural land. The memorandum recognises that the use of poor agricultural land may sometimes increase development costs and indicates that the Minister thinks authorities must be prepared to face some additional expense for this reason.

Needs of Private Enterprise

Authorities are again asked to take into account the need for sites for private enterprise housing and to give private developers every assistance. It is suggested that where there is difficulty in obtaining suitable sites they should consider acquiring land to make plots available for private development.

THE DEVELOPMENT OF NEW TOWNS

Factors which have Contributed to the Slow Rate of Building

THAT not until some administrative arrangement is made under which the total resources available for new towns are segregated and their detailed allocation made subject to the practical direction of the Government Department whose responsibility the new towns are, can there be a reasonable hope of a balanced and progressed development of the new towns taking place. This was one of the conclusions reached by MR. W. O. HART, C.M.G., General Manager of Hemel Hempstead New Town, in a paper on "The Development of New Towns," given at the Town and Country Planning Summer School, held under the auspices of the Town Planning Institute, at Bangor, from August 23–30, and from which we take the following extracts. Mr. Hart said :—

The sites for the earliest new towns were designated just over five years ago, and it is a convenient time to pause and take stock of what that period has taught about the development of new towns. I deliberately limit the subject in this way because nobody has yet had experience of more than the beginnings of developing new towns.

Indeed, to be honest I must go further in restricting the scope of my subject. New towns derive common parentage from the New Towns Act of 1946 : their development corporations are charged with the identical general task of developing new towns within their designated areas. But it may almost be said that there similarity ends : the purposes which new towns were established to fulfil, the problems to which they must seek the solutions and even the methods they have adopted for meeting their task differ, often widely. Thus the eight new towns established around London have, as their main purpose, assisting in carrying out the decentralisation proposals of the Greater London Plan : they are to take overspill both of industry and population, and with this material create self-contained and balanced communities within a radius of from 25 to 35 miles from central London.

Apart altogether from purely physical matters, such as those relating to drainage or water supply, the conditions in their designated areas create distinct and separate problems. Harlow, with an original population of some 4,000, was practically a virgin site, while Hemel Hempstead, with a manufacturing town of some 20,000, and Basildon, with 25,000 and a serious problem of extensive shack development, were quite differently placed. Projected size can also affect the matter : Bracknell's 25,000 goal must set a different scale from Harlow's revised total of 80,000. Further afield the variety is even greater. Aycliffe, with a target of 10,000, was established to provide living conditions for the labour employed at the adjoining trading estate. It will thus have to provide housing and such amenities and facilities as so small a population can support without the financial backing which the introduction of its own industries could have given. Corby, with the aim of 40,000, and Cwmbran, with 35,000, are somewhat similarly placed in that they were established to meet the needs of existing industries. Peterlee is designed to concentrate into town conditions the scattered mining communities of part of the Durham coalfield and to give secondary employment, particularly for women. In Scotland, Glenrothes has the object of helping in the shift of mine workers from a worked-out to a new coalfield, while East Kilbride is to Glasgow what the decentralisation new towns of the south are to London.

DIFFERING APPROACHES

In the way in which they have tackled their tasks the development corporations have by no means followed a uniform pattern. Some have made extensive use of the consultants and professional firms ; others have almost wholly done the corresponding work with their own staffs. Aycliffe has set up a direct labour department for some of its building work, whereas the other new towns have put out their construction work to contractors. Housing has naturally so far been almost wholly built by corporations, but factories have sometimes been built by corporations and sometimes by ground lessees. It would indeed be theoretically possible for one corporation to build the whole of its town and for another to arrange for it to be developed to the same extent under building leases.

With the variety in problems, purposes and methods, it is surprising to recall the original fears that the products of development corporations might be stamped with a uniformity of treatment which would prevent their new towns from having character and originality. A visit to the new towns which have completed sufficient development to allow some opportunity for judgment will give most interesting comparisons and will present the visitor with the teasing question of whether the distinctions he observes are the product of the physical conditions with which development had to cope, or rather of the personalities of those concerned with overcoming them. So far, in spite of all the controlling and deadening influences, there is individuality.

How long this will remain and whether it will be true of the younger new towns has still to be seen. There are forces and tendencies which perhaps may have a levelling influence : that times are hard is now more generally accepted than it was realised four or five years ago ; the emphasis on housing, the expansion of the housing programme by encouraging the use of non-traditional types of construction may tend to uniformity. In any event, as the new towns pass from their beginnings—which are all that we have so far actually experienced—towards their ends, the emphasis will tend to shift from planning and construction to property management, until they are ripe

for the winding up which is to be their ultimate fate. But again the pace at which this change will take place and the sequence of what may prove to be similar stages are unlikely to be identical and may well, as far as we can now see, differ widely, so that a uniform pattern cannot be foretold.

Uniform legal machinery there is, of course, in the New Towns Act. The sites of new towns are chosen by the Minister, who designates their areas and appoints the corporations to carry out their development. The first task is the preparation of a master plan defining in outline how the corporation proposes to develop the area designated as the site of the new town. This master plan is not required by the New Towns Act. Its approval by the Minister is thus no more than an administrative act and does not give to it the rigidity which would attach were the plan of statutory force. Detailed planning within the framework of the master plan proceeds in statutory forms.

THE SLOW RATE OF BUILDING

After summarising the story of Hemel Hempstead New Town, the speaker continued: It sometimes looks as if it were becoming a fashion to sneer at the small number of houses built and building in the new towns. Whether this will in fact spur on whatever authority really controls these things to show a better return may be doubtful, but it does serve to remind one how poor achievement has been when compared with declared intentions. The Reith Committee thought that the peak rate of building should be reached in three years, when a labour force of 5,000 would be producing houses at the rate of 2,000 a year. When I was first asked whether I would be interested in new town work, I was told that the programme of decentralisation into new towns was to be substantially completed in eight years. At the end of March this year, at Hemel Hempstead, which was then the farthest advanced of the new towns, it had taken us five years to produce 1,000 houses and a labour force of just under 2,000!

Why was this? At Hemel Hempstead, for example, litigation and economic stringency accounted for two years before construction on any scale was permitted to begin. Even then it has taken time for it to become established that the new towns, having survived the first economic crises, were not to succumb, or at any rate to be crippled, by succeeding attacks of the same malady or by changes in the political complexion of the Government. Such uncertainties do not make for drive in getting on with the job. They do, however, reinforce the entrenched tendencies to apply normal rules to what ought to be an abnormal undertaking. For instance, capital investment programmes determine the resources which may be expended each year on various types of activity. These programmes have not unnaturally been grouped under familiar headings, such as housing, factory building, public utility services, school building and so forth, and the needs of new towns under each heading have been thrown in with those of other bodies, public and private, to produce the final totals: nothing so novel as a separate category for new towns, cutting across the familiar headings, has been admitted.

The effect of this, itself apparently a trivial matter, has been that new towns have had to compete with the other claimants for the resources available under each heading. Moreover, national policies, controlling these resources and designed, naturally enough, to deal with the normal areas, have been applied by the appropriate Departments to the abnormal areas of new towns. And it is not until some administrative arrangement is made, under which the total resources available for new towns are segregated and their detailed allocation made subject to the practical direction of the Department responsible for new towns, that there can be a reasonable hope of a balanced and programmed development of the new towns taking place.

FIVE YEARS' EFFORT

But I am not here to apologise, but to assess what has come out of the five years' effort devoted to new town development. Looking back on it and remembering with humility how easy it is both to be wise after the event and to put blame elsewhere than on one's own shoulders, it is possible to draw certain conclusions or to make certain criticisms of the machinery and methods used. In general these might be summed up in the old and loose phrase about lack of agreement on fundamentals. By way of illustration I may instance a few matters on which a clear settlement of issues of fairly far-reaching importance had not been attained before the enterprise of new town development was started.

First may be instanced the status and position of development corporations themselves. Legally they are established by the Minister and have conferred upon them what at first might appear to be almost limitless powers to undertake nearly any activity for, or in respect of, their new towns. To stop reading the New Towns Act at the end of Section 2 would, however, give a very false impression. These general powers are hedged about in a number of ways. Nearly all the more important ones can in specific terms only be exercised with the approval or consent of the Minister—and sometimes only then with the concurrence of the Treasury—but a more general provision prohibits development corporations from borrowing from any source other than the Minister, who is empowered to advance the moneys necessary for financing their capital expenditure. Since he is under no legal obligation to make these advances, he is in effect able to impose what conditions—or to exercise what controls—he likes over the development they are required to finance. These arrangements necessarily make it difficult to place limits upon the extent of Ministerial control, since political responsibility for, at any rate, the financial success of new towns is so inescapably fixed on the Minister. This contrasts strangely with the choice of corporations as the instruments for developing new towns, since the implication is that they were chosen because it was desirable to have greater freedom than could be obtained were direct Government development to be adopted. If in the result development corporations are reduced to being little more than a sort of incorporated civil servants, then instead of having the advantage both of public authority and private enterprise organisation, they will only succeed in making the worst of both worlds.

Partly flowing from this exclusive dependence for finance upon the resources of the Central Government, problems of some difficulty arise about the relations between development corporations and the local authorities and statutory undertakers established in their areas.

That local government services should be provided, and provided in time, is vital. Schools are an obvious illustration, but open spaces and playing fields, street lighting and public conveniences, though optional in the sense that no local authority is compelled to provide them, may be essential if a rapid influx of population is to be absorbed satisfactorily in new towns.

The need for amenities to provide at least the rudiments of town life for the rapidly inflowing new population does not stop at local authority services. Shops, places of worship, places of entertainment, public houses, post offices, telephone kiosks and pillar boxes, to mention only a few of the more obvious, must be available in time. Here again is an organising job for the development corporation, since most of these facilities require not only to be fitted in due time into the development programme but also to be provided by, or with the co-operation of, other persons or authorities. Yet it is in these matters that national policies designed for the normal areas can jeopardise the new towns until, at any rate, it can be established that exceptions to the general rules

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must be made to meet their abnormal conditions.

PLANNING PROBLEMS

Now, the general planning of the new towns has occurred at a most unfortunate time. The earlier ones were established late in 1946 or early in 1947, when public sentiment was optimistic and when economic crises were still things of the future. Energy and enthusiasm, dammed up during the war years, was to be released at last. Moreover, this was to be no frustrating job of preparing mere paper plans to be gradually eroded over long years as committees of laymen compromised principle with the practical job of considering detailed planning applications. Now at last the plan was to be a plan for action ; immediate, comprehensive and entire. This mood proved ill assorted with the succeeding period of economic stringency, austerity and improvisation.

One of the difficulties caused by the changed circumstances is to know the standards which planning should seek to establish. Postponement, modification and omission of schemes which were originally conceived as desirable and called for by the new town idea have occurred, but reservations are still made for projects which, in the near future at any rate, have little hope of being carried out. There has not yet been any positive redefining of the essential requirements and therefore of standards consistent with this post-war age. Perhaps it is as yet too soon to do this, but its absence does make for uncertainty, inconsistency and consequent delay.

THE ARCHITECTURAL CHALLENGE

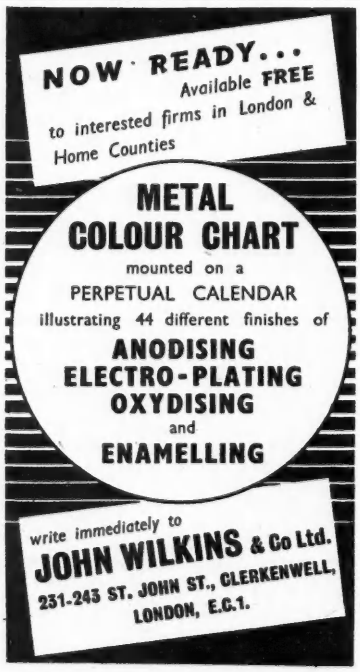
Much the same comments might be made about architecture. Granted that the taste of the people should be improved ; that architecture should be worthy of the whole ideal of the new towns, there must yet be some point at which moderation in these aims must be imposed, so that the resulting buildings are both economic for their promoters and convenient for their users. To take housing for example, the architectural desire for height to overcome the monotony of one roof level produces three-storey houses and abundance of flats. Yet where this has happened in the new towns it has proved that three-storey houses are unpopular and difficult to let, and that the attraction of flats in what will, after all be country towns, is very small in comparison with the overwhelming demand for houses with gardens. This is, moreover, no mere matter of prejudice or bad sales talk : though people want semi-detached houses, they nevertheless settle easily in well designed and modern terrace houses, and with experience come to like them.

Similarly, architecture has not spontaneously risen to face the economic problem. The new towns are perhaps peculiar in the post-war period as being the only places where large-scale development has been going on in conditions which require that the level of building costs should be fully reflected in the rents charged. This has raised problems which the sharp increase in costs during the last two years has accentuated. To command the necessarily high rents which development corporations must charge, their houses must be attractive to tenants. Yet in spite of this, have the architects, faced with the need to cut and pare, always given preference to fittings and finishings which make rooms more comfortable to live in, rather than to such rivals as facing bricks or other external embellishments ?

Indeed, it may not be unfairly asked—though I expect I shall promptly receive the sort of answer that such a question invites—whether architecture has really risen to the challenge of austerity, high costs and shortages.

After going into some detail on the problems involved in securing the right balance between housing and industry, Mr. Hart concluded : There is something almost awe-inspiring in reflecting that those who are developing new towns are determining the physical environment, and therefore one of the most material conditions of life, of their inhabitants for a century to come. Moreover, dependent upon a variety of other considerations, mostly, no doubt, economic, the standards established by the new towns of to-day may become the pattern for much wider redevelopment tomorrow. That may justify some measure of deliberate experiment in the new towns, but, if they are to be towns when their newness has worn off, if they are to be the living communities which alone can justify their building, they must be allowed to develop as naturally as their artificial creation can permit.

There are many theories in search of a laboratory in which to be tested: for the sake of the people who will inhabit them we must protect the new towns from being regarded as the natural places for this to be done. They are to be developed quickly and on a scale not before seen ; they must receive and absorb population rapidly ; but they must in the end stand or fall by their success or failure as places in which people can live and work happily, conveniently and efficiently. They are one of the main challenges to planning, and a challenge presented at a time when economic resources prohibit in many cases the obviously—or perhaps the easily—best. The success with which the challenge is met will be tested by the character of life in the new towns when they are completed, rather than merely by the excellence of the material environment they provide.



SOFTWOOD IMPORTS, 1953

First Instalment of 500,000 Standards Authorised

THE Ministry of Materials announces that arrangements are in hand, in conjunction with the Board of Trade, for licensing the import of softwood for arrival in 1953 up to a limit of 500,000 standards, representing a first instalment of the United Kingdom's requirements for the whole year. The total figure for 1953 softwood imports has not yet been decided, but it will be enough to maintain adequate stocks and a level of consumption which is not expected to be lower than that for 1952.

It has been decided, after considering the views of the Softwood Decontrol Committee, that there should be no quotas for individual importers for softwood imports in 1953. The Board of Trade will shortly be issuing a notice to importers giving details of the method of applying for import licences. In the meantime, no applications will be considered.

There will be no discrimination between sources of supply of softwood, and importers are completely free to choose between them on a commercial basis. Licences for imports originating in, and consigned from, the scheduled territories will not, however, be set against the 500,000 standard limit. The arrangements outlined above cover softwood timber, including sleepers and crossings. They do not cover pulpwood, mining timber or boxboards, for which the present procedure will continue; nor do they cover any type of roundwood or poles, for which separate arrangements will be made. Inquiries about these "excluded" types should be addressed to the Timber Control at Lacon House, Theobalds-road, London, W.C.1.

All holders of import licences will receive copies of form SPP, with a statutory direction requiring completion and return each month. Full and prompt return of these forms is essential so that the Government and the trade can be kept informed of buying progress, and failure to return the forms by the due date will be regarded as a serious matter.

Importers are reminded that the 500,000 standards represent only the first instalment of the 1953 import. An announcement will be made in due time about the further imports which will be necessary to meet 1953 requirements.

Technical College for Birmingham

It is expected that the new branch technical college at Brooklyn Farm, Beeches Estate, Birmingham, will be ready for use next year. The college is primarily intended to provide facilities for technical and craft training in building.

LAW REPORT

The "Fair Wages Clause"

Contractor not Liable to Workman in Respect of Sub-contractor's Breach

FOLKESTONE COUNTY COURT

Hughes v. J. B. Rose and Co., Ltd.

WHAT was described as a test case brought to determine whether a contractor subject to the "Fair Wages Clause" was liable to a workman employed by a sub-contractor in respect of the latter's breach of his contract with the workman was heard on January 22 last at Folkestone County Court.

The workman, Harry Hughes, had been engaged by Messrs Curry and Kelly, sub-contractors for bricklaying of the main contractors, Messrs. J. B. Rose and Co., Ltd., and he now sued Messrs. Rose for the sum of £2 9s. 7d. for two days' work and £2 12s. in respect of 13 weeks during which no holiday stamps had been provided. The sub-contractors were said to have retired overseas.

After dealing with certain minor questions, the judge turned to the main point of the case. It had been argued by counsel for the workman that there was a statutory obligation on the part of the contractors to pay the workman his wages if they were not paid by the sub-contractor. In his view this argument was not valid, said his Honour. Section 72 (3) of the Housing Act, 1936, provided—"it shall be the duty of a Local Authority. . . . by whom any house is erected . . . . to secure—

(a) That a fair wages clause complying with the requirements of any resolution of the Commons House of Parliament for the time being in force with respect to contracts of Government Departments is inserted in all contracts for the erection of the house." The terms of that Act were perfectly plain, namely, that it should be the duty of the local authority to secure that a "Fair wages clause" was *inserted in all contracts* for the erection of the house. There was nothing in the Act directly placing any obligation on the contractors, still less any obligation to be liable for the default of their sub-contractors.

It was argued by counsel for plaintiff [Mr. Elwyn Jones] that so to hold was to drive a coach and four through the Act of Parliament. Even if he were able to accept that argument, it would not in his view avail the plaintiff, added the judge. If Parliament passed an Act through which a coach and four could be driven, it was for the Legislature and not for the Judiciary to erect road blocks on the undesired road. But he was not satisfied that counsel's interpretation reflected necessarily the intention of Parliament. If Parliament had intended to place that grave burden on the contractors it was perfectly easy for it to have said so. It was a not unreasonable approach to the problem that Parliament should ensure that appropriate terms be inserted in all the contracts for the erection of houses and should leave it to the process of law, to the power of the local authorities with reference to future contracts, and to public opinion, to secure its end. "No doubt it is theoretically possible for a contractor to evade his obligations to pay Union rates by sub-contracting to someone who does not do so. Possibly this is a gap in the Act but it certainly does not necessarily nullify it."

The Judge continued: If I am right as to this a meticulous examination of the resolution is not necessary, but certain comments may not be out of place. The opening paragraph provides that.

"The contractor shall pay. . . ." certain rates of wages, etc. I think it is quite plain that this cannot possibly be intended to make the contractor pay the wages of the sub-contractor's workmen. Indeed the somewhat curious terms of Clause 6 *may* be intended to ensure that a sub-contractor should be vis-à-vis his contractor in the same position as the contractor is to the local authority.

"I cannot, however, refrain from pointing out that the form of Clause 6 is remarkable. Strictly interpreted it places on the contractor the responsibility for the observance of the resolution by sub-contractors. But since the only other terms of the resolution are confined to the contract, a literal interpretation would result in the contractor being responsible for the sub-contractor observing the contractor's obligations. This is not mere verbal criticism, because if it is attempted to interpret Clause 6 so as to affect the sub-contractor directly, there are a number of alternative provisions with different results which could be used to achieve this end, and to adopt any one of them would be to rewrite the resolution.

"It was pointed out by Mr. Lemieux [counsel for defendants] in his most closely reasoned argument that the only sanctions set out in the Act are those against the Local Authorities, e.g. Section 113. This seems to some extent to support the views I have already indicated.

"Mr. Elwyn Jones' argument that since the Statute imposes obligations, the workman being one of the beneficiaries is therefore entitled to bring an action, in my view fails."

***This is the case referred to by Mr. Harry Adams, immediate past-president of the Amalgamated Union of Building Trade Workers, in a speech on July 14 (reported in *The Builder* of July 18) when, after stating that the Union's experience of payment-by-results and labour only sub-contracting had been "a considerable disappointment," he alluded to "a judgment given by a county court judge which not only dashes our hopes of smooth working but in fact appears to completely destroy the cover of the Fair Wages Clause resolution passed by the House of Commons on October 14, 1946." We are enabled to give this summary of the judgment in question through the kindness of Sir Richard Coppock, General Secretary, N.F.B.T.O.—ED.*

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"REORGANISATION OF THE BUILDING INDUSTRY"

Tenants' Associations' Call

THE National Council of Tenants' and Residents' Associations, in a statement issued on August 23, in which it calls for a complete reorganisation of the building industry, states that considerable time is wasted on nearly every project because of lack of organisation, tradesmen having to do jobs twice because of bad management, materials being wasted, and time wasted by tradesmen having to "hang about" on jobs.

"The Government must take steps to reduce interest rates and profits in the building trade," the statement adds. The cost of houses can be reduced by correctly managed direct labour schemes, which are operated only in a few areas. A speeding up of construction, which takes with it a reduction in the total cost, could be achieved by intensive capital expenditure on the mechanisation of the industry.

"Insufficient use is made of prefabricated units, and where prefabrication has been used so far the manufacturers have been allowed to get away with very high prices. The Government subsidy of £26 14s. a year a house is now insufficient, and since the cost of repairs is still rising and the housing repairs funds of many local authorities are in a dangerously weak position, further subsidies are necessary."

OFFICIAL NOTIFICATIONS

Water Supply for Housing

The Minister of Housing and Local Government, in Circular No. 66, reminds water undertakers and housing authorities of the long delivery periods quoted by the suppliers of cast iron pipes, particularly in respect of orders placed for the smaller ranges of pipes.

In present conditions, states the circular, it is clear that water undertakers must be ready to place orders for pipes to serve new houses many months in advance of the time that the pipes are required. If pipes are not ordered at least 18 months ahead, there is a possibility of new houses otherwise ready for occupation remaining unoccupied pending the provision of a water supply.

If the housing authority are not the statutory water undertakers, it is essential that they should keep the latter fully and punctually informed of future housing programmes, including houses to be provided by private builders. The Minister urges the need for much closer exchange of information between housing authorities and water undertakings. All particulars of requirements should be sent to the appropriate regional office of the Ministry.

Amended Safety Regulations

On August 26 last the Minister of Labour and National Service made regulations under the Factories Acts which amend the Building (Safety, Health and Welfare) Regulations, 1948 (S.I. 1948, No. 1145), by substituting an amended Regulation 87 dealing with the use of certain mechanically propelled vehicles and mechanically drawn trailer-vehicles on a building site. The principal effect of the regulations is to modify the requirements relating to the safe loading and operation of such vehicles and to clarify the intention of the requirements. The new regulations, the Building (Safety, Health and Welfare) Amendment Regulations, 1952 (S.I. 1952, No. 1584) come into force on November 1 next. Copies are obtainable from the Stationery Office.

The Builder

CURRENT PRICES OF MATERIALS

THE information given on these pages has been specially compiled for *The Builder* and is copyright. It is the intention that the details given should indicate fair average prices of materials not necessarily the highest or the lowest. The prices apply to large quantities of materials loaded at works, delivered at London Stations or at site in London Area as stated. Prices for smaller quantities ex merchant's warehouse will necessarily be higher so as to include the stocking and handling costs involved. Due to the exceptional circumstances now prevailing it is recommended that the prices of materials should be confirmed by inquiry from suppliers and merchants.

AGGREGATES AND SAND

Delivered site in full lorry loads. Average of prices for Boroughs of Westminster, Paddington, Holborn and St. Pancras.

		£ s. d.
Pit Ballast	per yd.	1 0 5
Pit Sand	,,	19 5
Washed Sand	,,	1 1 3
¾ in. Shingle	,,	17 11
½ in. Broken Brick	,,	19 3
Pan Breeze	,,	9 6
Fine or Coarse Foamed Slag Aggregate	per ton	2 16 10

CEMENT, etc.

Including non-returnable jute sacks or paper bags.

Best British Portland Cement. Standard Specification delivered Charing Cross area.		
6-ton loads and upwards, site	,,	4 14 0
1 to 6 tons, site	,,	5 3 0
Ferrocrete Rapid Hardening Cement in 6-ton loads and upwards to site	,,	5 2 0
1 to 6 ton do. site	,,	5 11 0
Aquacrete Water Repellent Cement. 32s. 6d. per ton on ordinary cement prices.		
Red, Buff or Khaki Colorcrete in 6-ton lots	,,	6 15 6
Other colours according to colour		
In 4-ton lots from 196s. 3d. to 420s. 3d. per ton.		
White Portland Cement	,,	12 14 6
Under 1 ton	per cwt.	15 2
417 Cement (Ultra Rapid Hardening) in 6-ton lots and upwards	per ton	6 6 6
Super Cement (Waterproof), 32s. 6d. per ton above Portland Cement.		
Cullamix Tyrolean Finish, £8 18s. 9d. to £10 12s. 3d. (1-ton loads and upwards).		
Lightning and Cement Fondu Brands High Aluminous cement, 6-ton lots and up	,,	14 12 6
Stourbridge Fireclay, 6-ton loads at Railway Depot, London		5 19 0

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Second Hard Stocks	,,	9 19 0
Mild Stocks	,,	8 8 0
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Cellular do.	,,	5 8 0
Keyed do.	,,	5 10 0
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Cellular Rustics	,,	6 13 0
Single Bullnose do.	,,	6 8 0
Sandfaced	,,	7 8 0
Cortex Facing Bricks	,,	6 3 0
Best Blue Pressed Staffs (London Stations)	,,	22 19 0
Do. Bullnose (London Stations)	,,	23 13 6
Blue Wire Cuts (London Stations)	,,	20 12 0
Midhurst Lime Bricks (London Sites)	,,	9 5 0
Uxbridge Whites (London Sites)	,,	8 2 6
2½ in. Best Stourbridge Fire Bricks (London Stations)	,,	21 4 6
3 in. do. (London Stations)	,,	25 11 0
2¾ in. Machine-made Sandfaced Red Facings (London Sites)		12 19 6
2¾ in. Machine-made Multi Red Facings (London Sites)		13 4 6
2¾ in. Hand-made Sandfaced Red Facings (London Sites)		13 16 0
2¾ in. Hand-made Sandfaced Multi Colour Facings (London Sites)		13 16 0
2¾ in. Surrey Clamp Burnt Multi Stock Facings (London Sites)		12 9 0
2¾ in. Surrey Kiln Burnt Multi Stock Facings (London Sites)	per 1,000	13 2 6
Glazed Bricks (London Stations), White, Ivory, Brown—		
Stretchers	,,	40 0 0
Headers	,,	39 10 0
Quoins, Bullnose and 4½-in. Flats	,,	50 0 0
Double Stretchers	,,	53 0 0
Double Headers	,,	48 10 0
One side and two ends	,,	54 10 0
Two sides and one end	,,	56 0 0
Splays and Squints	,,	52 0 0

Second quality £2 less than Bests. Cream and Buff £2 extra over White. Other colours, hard glaze, £5 10s. 0d. extra over White. All above plus 60 per cent. for Bests and plus 55 per cent. for Second quality. Plus delivery to site, 30s. per 1,000.

PARTITION SLABS, etc.

Delivered Central London Area.

HOLLOW CLAY PARTITION BLOCKS (Keyed)

	Minimum lorry loads		
2 in.	150 yds.	per yd. sup.	4 2
2½ in.	135 yds.	,,	4 5
3 in.	125 yds.	,,	4 11
4½ in. (3 cavity)	95 yds.	,,	6 5
4½ in. (6 cavity)	80 yds.	,,	7 1

Half blocks at no extra charge.

CLINKER CONCRETE

2 in.	100 yds.	,,	3 2
2½ in.	85 yds.	,,	3 9
3 in.	75 yds.	,,	4 4
4 in.	55 yds.	,,	5 6

CRANHAM

2 in.		,,	5 8
2½ in.		,,	6 2
3 in.		,,	7 3
4 in.		,,	8 11
4½ in. Load bearing quality		,,	9 11

FLOOR BLOCKS

3 in. Floor Blocks 12 in. by 12 in. delivered in full lorry-loads		per 1,000	30 12 0
4 in. do.		,,	33 13 0
5 in. do.		,,	38 5 0
6 in. do.		,,	45 9 0
7 in. do.		,,	52 10 0
8 in. do.		,,	59 19 0

STONEWARE DRAIN PIPES, etc.

The following are the percentages to be added to the Standard List prices delivered London Area.

	Over 2 tons.	Over 100 Pieces under 2 tons.	Under 100 Pieces under 2 tons.
Best Quality	+67½%	+87½%	+97½%
B.S.S. Best do.	+10% +67½%	+10% +87½%	+10% +97½%
Tested Quality	+37½% +67½%	+37½% +87½%	+37½% +97½%
B.S.S. Tested do.	+47½% +67½%	+47½% +87½%	+47½% +97½%

		£ s. d.
3 in. Land Drain Pipes (in 12 in. lengths)	per 1,000	9 15 0
4 in. do.	,,	12 15 6
6 in. do.	,,	26 9 0

STONE

Bath Stone—		
Monks Park	per ft. cube	6 7
St. Aldhelm Box Ground	,,	7 7
Delivered in railway trucks at South Lambeth. B.R. Western Region.		
Doulting Stone Random Blocks. Delivered London area	,,	7 4
Beer Stone. Delivered London area		6 11
Portland Stone—		
Brown Whitbed in random blocks, 20 ft. average delivered in railway trucks at Nine Elms, B.R., Southern Region		4
Hopton-Wood Stone—		
F.O.R. Quarries, Wirksworth, Derbyshire—		
¾ in. Slabs for wall lining, sawn two sides in random sizes up to 5 ft. and not over 15 ft. super in area	per ft. sup.	7 2
1¼ in. Slabs for paving, sawn two sides as above described		9 11
Yorkshire Stone—Blue Robin Hood Quality.		
Delivered to site London in 6-ton lots.		
9 in. × 3 in. Rubbed, weathered, throated and stooled cills	per ft. cube	2 19 6
12 in. × 6 in. do. do.	,,	2 2 3
12 in. × 3 in. Plain coping, twice throated	,,	1 12 6
12 in. × 3 in. Weathered and twice throated coping	,,	2 3 6
14 in. × 6 in. do. do.	,,	1 19 0

STONE—continued

	£ s. d.
4½ in. × 9 in. Plinth, rubbed on top and face ... per ft. cube	1 15 0
3 in. sawn two sides Slabs, random sizes ... per ft. sup.	6 3
Templates and Cover Stones, 3 in., 4 in. and 6 in. thick, edges coped for rendered brickwork ... per ft. cube	1 1 6
Do. do., fair one edge for fair faced brickwork ... ... ,,	1 5 6
Hard York—	
12 in. × 2 in. Square Steps, rubbed on top and edge per ft. run	7 6
14 in. × 3 in. Round-nosed Steps, rubbed on top and front ... ... per ft. cube	2 0 0
12 in. × 6 in. Plain Steps, rubbed top and front ,,	1 15 3
2 in. Rubbed and Jointed Paving, given sizes ... per ft. sup.	7 3
2 in. Sawn Paving, edges squared, in random sizes per yd. sup.	2 9 3

TILES and PANTILES

Delivered London area by road in 6 tons or over per 1,000	
Machine-made Pantiles and French pattern Tiles from Lincolnshire district	26 10 0
Hand-made Pantiles Berkshire district	41 5 0
Hand-made Double Roman Bridgwater district	54 0 0
Hand-made 10½ × 6½ tiles Berkshire district	12 2 0
Machine-made 10½ × 6½ Staffordshire district	12 4 0
Hand-made Hip and Valley tiles per doz.	1 6 0
Machine-made Hip and Valley tiles do.	1 3 9
Concrete tiles 10½ × 6½	6 13 0
do. Interlocking (49S)	17 15 0

NOTE.—Breakage in transit, purchasers' responsibility.

SLATES

First-quality Slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.	
24 × 12	96 7 6
22 × 12	82 10 0
22 × 11	74 10 6
20 × 12	69 17 0
20 × 10	65 10 6
18 × 10	48 10 9
18 × 9	43 9 0
16 × 10	42 12 6
16 × 8	33 8 3

NOTE.—Breakage in transit, purchasers' responsibility.

TIMBER

Softwood—				
Joinery quality	Ex Wharf per standard		£105 to £125	
Carcassing quality	do.	,,	£90 to £100	
1 in. Tongued and Grooved Flooring	do.	,,	£105 0 0	
Hardwood—				
Mahogany—African S.E.	do.	per ft. cube	1 7 6	
do. Honduras do. ...	do.	,,	2 15 0	
Oak European do. ...	do.	,,	2 0 0	
do. Japanese do. ...	do.	,,	1 17 6	
do. English Logs sawn ...	do.	,,	1 5 0	
Teak 8 in. average S.E. ...	do.	,,	3 0 0	
Walnut African Logs sawn	do.	,,	1 2 6	

DOORS (in Lots I—II)

Delivered London area.	
1½ in. 4 Horizontal Panel. Pattern 4 in deal	
2 ft. 0 in. × 6 ft. 6 in. ... ... each	1 13 9
2 ft. 3 in. × 6 ft. 6 in. ... ... ,,	1 14 9
2 ft. 6 in. × 6 ft. 6 in. ... ... ,,	1 15 9
2 ft. 9 in. × 6 ft. 6 in. ... ... ,,	1 18 3
2 in. do., but top panel open. Pattern 4 × G in deal	
2 ft. 6 in. × 6 ft. 6 in. ... ... ,,	2 13 0
2 ft. 9 in. × 6 ft. 6 in. ... ... ,,	2 16 0
2 in. 2 Panel, top panel open. Pattern 2 × G in deal	
2 ft. 6 in. × 6 ft. 6 in. ... ... ,,	2 5 6
2 ft. 9 in. × 6 ft. 6 in. ... ... ,,	2 9 6

SUNDRIES

Delivered London area		
1 in. Wood Wool Slabs, 6 ft. 0 in. × 2 ft. 0 in. in quantities of 1 ton (89 yds. to 1 ton) ... ... per yd.	5 10	
1½ in. do. (67 yds. to 1 ton) ... ... ,,	7 6	
2 in. do. (52 yds. to 1 ton) ... ... ,,	9 2½	
2½ in. do. (45 yds. to 1 ton) ... ... ,,	10 9	
3 in. do. (39 yds. to 1 ton) ... ... ,,	11 11½	
Quantities under 1 ton add 1d. per ¼ in. of thickness.		
½ in. Imported Insulation Board, quantities over 5,000 sq. ft. per 100 sq. ft.	2 5 0	
¼ in. Hardboard do. ... ... ,,	2 8 0	
⅛ in. do. do. ... ... ,,	3 7 0	
⅛ in. Asbestos Flat Building Sheets ... ... per yd. sup.	2 3	
Roofing Felt, 1-ply ... ... ,,	1 6	
do. 2-ply ... ... ,,	1 9	
Best Scotch Glue, in slabs ... ... per ½ cwt.	5 0 0	
do. pearl ... ... ,,	5 5 0	
Croid Glue ... ... 28 lb.	2 5 0	
Cut Nails, 3 in. and up (1-ton lots) ... ... per ton	59 15 0	
Wire Nails, 3 in. and up (4-cwt. lots) ... ... per cwt.	2 13 6	

METALS

STEEL JOISTS, ETC.

Basis Joists—	
6 in. × 5 in., 8 in. × 5 in., 8 in. × 6 in., 10 in. × 6 in., 12 in. × 6 in. plain, cut to lengths delivered London area ... ... per ton	36 0 0
Extra for sizes	
3 in. × 1½ in. ... ... ,,	3 10 0
3 in. × 3 in., 4 in. × 3 in., 5 in. × 2½ in. ... ... ,,	1 5 0
4 in. × 1½ in. ... ... ,,	3 0 0
4½ in. × 1½ in., 24 in. × 7½ in. ... ... per ton	2 0 0
5 in. × 3 in., 22 in. × 7 in. ... ... ,,	1 0 0
6 in. × 3 in. ... ... ,,	1 10 0
9 in. × 7 in.	5 0
10 in. × 4½ in., 12 in. × 5 in. ... ... ,,	15 0
5 in. × 4½ in., 6 in. × 4½ in., 7 in. × 3½ in., 7 in. × 4 in., 8 in. × 4 in., 9 in. × 4 in., 10 in. × 5 in., 10 in. × 8 in., 12 in. × 8 in., 13 in. × 5 in., 14 in. × 5½ in., 14 in. × 6 in., 14 in. × 8 in., 15 in. × 5 in., 15 in. × 6 in., 16 in. × 6 in., 16 in. × 8 in., 18 in. × 6 in., 18 in. × 7 in., 18 in. × 8 in., 20 in. × 6½ in., 20 in. × 7½ in. ... ... ,,	10 0
Steel angles average price ... ... ,,	37 5 0
Steel tees average price ... ... ,,	38 5 0
Fabricated work delivered London—	
R.S. Joists cut and fitted ... ... ,,	50 0 0
Compound girders ... ... ,,	55 0 0
Stanchions ... ... ,,	60 0 0
Compound stanchions ... ... ,,	63 0 0
In Roof Work—Trusses and Purlins ... ... ,,	75 0 0
Average prices not for awkward work.	
Mild Steel Ferro-Concrete bars to BSS785 ex London Stock ⅜ in. diam., and upwards ... ... ,,	36 2 6
¼ in. diam. ... ... per ton extra	3 12 0
⅜ in. do. ... ... ,,	2 17 0
⅛ in. do. ... ... ,,	2 2 0
½ in. do. ... ... ,,	1 7 0

MILD STEEL TUBES

Tubes to BSS1387 and Fittings. List prices and following discounts :

Galvanised Tube—	W.I. Fittings	Malleable Fittings
Class A + 1½%		
Class B + 1½%	Light + 20½%	Malleable List — 45½% + 40%
Class C + 27½%	Heavy + 27½%	
Black—		
Class A — 23½%		
Class B — 13%	Light + 6½%	Malleable List — 45½%
Class C NET	Heavy + 13½%	

C.I. HALF-ROUND GUTTERS

Delivered London per yd. in 6-ft. lengths	Gutters	Nozzles	Stop Ends
3 in.	3/-	2/7½	/8½
3½ in.	3/4	3/-	/8½
4 in.	4/2½	3/2	1/3
4½ in.	4/6½	3/8	1/5
5 in.	5/3	4/-	1/7

C.I. O.G. GUTTERS

3 in.	3/10	3/6	/10½
3½ in.	4/4½	3/6	1/3
4 in.	4/8½	3/8	1/5
4½ in.	5/3	4/2½	1/7
5 in.	5/7	4/11	1/9

C.I. RAIN-WATER PIPES

Per yd. in 6-ft. lengths	Pipes	Bends	Branches
2 in.	6/1½	3/2	4/8½
2½ in.	6/6	3/8	5/7
3 in.	7/2	4/6½	6/10
3½ in.	8/3	5/5	7/10½
4 in.	9/6	6/6	9/6

L.C.C. COATED SOIL PIPES

2 in.	7/4	5/7	6/10
2½ in.	7/8½	6/4	8/5
3 in.	8/7	6/10	10/2
3½ in.	9/7½	8/5	11/9
4 in.	11/1	9/6	13/7

Above prices for gutters, rain-water and soil pipes for under 3 cwt. lots only. Lots over 3 cwt. see List No. 3200 dated May 1, 1952, net and tonnage allowance. 4-ton lots 5 per cent. 2-ton lots 2½ per cent.

L.C.C. COATED DRAIN PIPES

In 9-fts.

	cwt.	qr.	lb.	per yd.	Bends	Branches
4 in.	1	1	17	18/10	13/-	22/11
6 in.	2	0	1	28/1	27/1	46/11

ASBESTOS RAIN-WATER PIPES AND FITTINGS

Orders under £30 less 12½ per cent. discount.
Orders over £30 less 17½ per cent. discount.

		2 in.	2½ in.	3 in.	4 in.
Pipes 6-ft. lengths ...	per yd.	3/1½	3/6½	4/2½	5/10
Shoes	each	2/-	2/3	2/8	4/1
Single Branches ...	,,	3/3	4/1	4/10	6/9
Bends square or obtuse	,,	2/3	2/7	3/3	4/8
Swan Necks 4½ in. or 6 in. projection	,,	2/9	3/7	3/10	5/8

ASBESTOS O.G. GUTTERS AND FITTINGS

		4 in.	4½ in.	5 in.	6 in.
Gutters 6-ft. lengths ...	per yd.	3/3	3/7	4/3	5/2
Drop ends	each	2/3	2/4	2/7	3/3
Stop Ends	,,	/9	/10	/11	1/1
Angles and nozzles ...	,,	2/8	3/1	3/7	4/3
Union Clips	,,	1/4	1/7	1/11	2/3

ASBESTOS HALF-ROUND GUTTERS AND FITTINGS

		3 in.	4 in.	4½ in.	5 in.	6 in.
Gutters 6-ft. lengths	per yd.	2/3	2/8	2/9	3/3	4/7
Drop ends	each	1/10	1/11	2/-	2/3	2/9
Stop ends	,,	/8	/9	/10	/11	1/1
Angles and nozzles ...	,,	2/1	2/3	2/8	2/9	4/1
Union Clips	,,	/11	1/-	1/1	1/3	1/10

METALS—continued

	Per ton basis in London £ s. d.
Iron—Staffordshire Crown Merchant Quality	40 0 0
Mild Steel Bars	35 1 0
Mild Steel Hoops	36 8 6
	Ex Merchant's Stock per ton Two-ton lots £ s. d.
Soft sheets C.R. and C.A.—	
20 gauge	42 9 0
24 gauge	43 14 0
26 gauge	44 14 0
Galvanised Corrugated sheets 6 ft. to 9 ft.,—	
20 gauge	54 10 6
24 gauge	56 10 6
26 gauge	59 5 6
Galvanised Flat sheets C.R. and C.A.—	
20 gauge	55 10 6
24 gauge	47 11 6
26 gauge	60 5 6

Metal Windows.—Standard Metal Windows B.S. 940. Prices on application British Metal Window Manufacturers' Association, Ltd.

PLUMBERS' BRASS WORK, COPPER, ZINC, ETC.

Delivered in London area

All per doz.	M.O.H. ½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Screwdown bib cocks Crutch head for iron	86/3	132/-				
Toilet bib cocks for iron	135/-	182/6				
Screw down stop cocks for iron	86/-	120/-	186/-	368/-	548/-	941/-
do. with two unions for lead	124/-	165/-	263/-	488/-	703/-	1253/-
Double nut boiler screws	26/-	32/-	55/-	83/-	128/-	202/-
Heavy Croydon ball valves	226/-	348/-	481/-	732/-	903/-	
Plumbers' union brass lead to iron	23/-	33/-	41/-	72/-	96/-	190/-
	1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
Caps and screws	29/-	35/-	50/-	92/-	120/-	130/-
Brass sleeves		31/-	42/-	72/-	87/-	109/-
	1½ × 6 lb.	1½ × 6 lb.	2 × 7 lb.	3 × 7 lb.		
Lead P. trap with brass cleaning screws	69/-	87/-	138/-	236/-		
Lead S. trap do.	83/6	104/-	170/	305/-		

Solder	s. d.
Plumbers' per lb.	4 3
Tinmen's ,,	5 0
Blow pipe ,,	5 2

Copper tubes BSS6 59/1944 on the basic price of 32¾d. per lb., plus gauge and manufacturing extras as follows. Minimum quantities, 3 cwt.

	Extra d.	Total per lb. d.
¼ in. × 19 gauge	14⅝	47
⅜ in. × 19 ,,	13¼	45⅝
1 in. × 18 ,,	11½	44⅛
1¼ in. × 18 ,,	11½	43⅝
1½ in. × 18 ,,	11¼	43⅜
2 in. × 17 ,,	12¾	45⅛

	£ s. d.
Rolled Copper sheets up to 48 in. wide, basic price plus gauge and manufacturing extras per ton	335 10 0
Sheet Zinc, 10 gauge, 5 cwt. lots upwards per cwt.	9 10 9
do. 12 gauge do. ,,	9 8 9
Brass tubes basic price, plus gauge and manufacturing extras per lb.	2 3½

LEAD SHEET AND PIPE

Basis selling price in minimum one-ton delivery to one address in London or Home Counties.

	£ s. d.
Lead Sheet, English, 3½ lb. substance and upwards per ton	155 5 0
Lead Water Pipe in coils ,,	156 10 0
Lead Soil Pipe, 10 ft. or over 2 in. to 4 in. dia. ,,	158 0 0
do. over 4 in. dia. ,,	160 0 0
Lead Gas or Untinned Compo pipe ,,	158 0 0
Extras over Basis for quantities under 1 ton	
5 cwt. and under 1 ton per cwt.	2 0
3 cwt. do. 5 cwt. ,,	4 0
1 cwt. do. 3 cwt. ,,	6 0
Smaller quantities than 1 cwt. priced specially.	
Supplying sheet lead and lead pipe to less than basis weights and cutting to sizes less than basis charged extra according to current trade schedule.	
Allowance for Old Lead, collected £119 5. 0. per ton weighed at buyer's works.	

PLASTER, etc.

	£ s. d.
Coarse Pink in 1-ton loads and over Delivered on Site per ton	7 4 9
do. White. do. do. ,,	7 12 6
Sirapite Coarse do. do. ,,	7 8 0
do. Fine do. do. ,,	7 16 0
Blue Lias Lime in 6-ton loads ,,	6 14 6
Hydrated Lime do. ,,	5 9 0
Lump Lime do. ,,	4 16 6
White Keen's or Parian Cement in 1-ton loads ,,	9 19 6
Pink Keen's or Parian Cement in 1-ton loads ,,	9 14 3
Granite Chips in 6-ton loads ,,	2 4 6
Hair per cwt.	4 17 6
Gypsum Plaster Lath or Base Board ⅜ in. thick 600 yds. and over in one delivery. Delivered site per yd.	2 4
Gypsum Plaster Wall Boards, 3 and 4 ft. wide, 6 to 12 ft., ⅜ in. thick, 600 yds. and over in one delivery. Delivered site ,,	2 7

PAINT AND DISTEMPER

	£ s. d.
Delivered London area.	
Ceiling Distemper per cwt.	1 12 0
Washable Distemper ,,	5 12 0
Gloss Paint per gal.	2 15 0
Snowcem cement paint (in 1 cwt. drums) per cwt.	3 11 0
LEAD PRODUCTS AND OILS	
Ground White Lead 5 cwt. casks per cwt.	9 4 6
1 cwt. kegs ,,	9 11 6
Genuine White Lead Paint, 20 gal. lots in 1 gal tins per gal.	3 2 6
Genuine Red Lead, Dry, 1 cwt. keg per cwt.	8 4 0
Genuine Linseed Oil Putty, 1 cwt. keg ,,	3 0 3
Size XD quality, 28 lb. per tin	9 0
Raw Linseed Oil (5 gal.) Drums extra per gal.	19 6
Boiled Linseed Oil (5 gal.) do. ,,	1 0 0
SUNDRIES.	
Turpentine substitute (5 gal.) do. ,,	5 7½
,, do. (40 gal. drum) do. ,,	4 9⅝
Solignum, Brown (5 gal. cans), Exterior ,,	6 6
Creosote (40 gal. barrels) ,,	2 0
Paste Powder (1 lb. packets) per lb.	1 6
White Lining Paper per piece	1 7

VARNISHES, etc.

	£ s. d.
Delivered London area.	
Oak Varnish, Outside or Inside per gal.	1 12 6
Oak Pale Copal do. ,,	1 15 0
Hard Drying Oak for Inside ,,	1 17 6
Crystal Paper Varnish do. ,,	1 15 0
Eggshell Flat Varnish do. ,,	2 2 6
Finest Carriage Varnish ,,	2 10 0
Front Door Varnish ,,	1 17 6
Japan Gold Size ,,	1 10 0
Black Japan ,,	1 5 0
Brunswick Black ,,	1 0 0
Berlin Black ,,	1 5 0
Terebine ,,	1 5 0
Knotting (1 gal. bottles free) ,,	2 0 0
French and Brush Polish (do.) ,,	1 13 0

GLASS

Delivered London area

Sheet Glass, Ordinary Glazing Quality. Cut sizes.

	s. d.
18 oz. per ft. super	4½
24 oz. ,,	6
26 oz. ,,	7¾
32 oz. ,,	10½
English Rolled Plate and Figured Cathedral, etc., in cut sizes, over 500 ft. super of all kinds	
Rolled Plate ¼ in. ,,	7⅞
Rough cast ⅜ in. ,,	9
Rough cast ¼ in. ,,	9
Figured Rolled, and Cathedral standard patterns ,,	7⅞
Figured Rolled, Standard Tints ,,	1 3½
Figured Rolled Special Tints ,,	2 7½
Figured Rolled Real Ruby ,,	3 11¼
¼ in. Cross Flexon, Pinstripe, Hammerstripe and Reeded Glass (viz. Narrow Reeded, Broad Reeded, Major Reeded, Cross Reeded, Narrow Reedlyte, Broad Reedlyte Luminating) ,,	11
Wired cast, ¼ in. thick ,,	10½
Georgian Wired cast ,,	10¾

Hollow Glass Blocks—	
P.B. 2 5¾ × 5¾ × 3⅞ in. each	2 9
P.B. 3 7¾ × 7¾ × 3⅞ in. ,,	4 2
P.B. 32 7¾ × 7¾ × 3⅞ in. ,,	4 2
Radiused Corner Brick to match up with—	
P.B. 2 ,,	5 3
P.B. 3 ,,	6 9
P.B. 32 ,,	6 9

Polished Plate Glass. Ordinary substance about ¼ in. thick per ft. super

	Glazing for Glazing purposes s. d.	Selected Glazing Quality s. d.	Silvering Quality s. d.
In plates not exceeding—			
2 ft. sup.	3 7	4 3	5 1
5 ft. sup.	4 5	5 2	6 2
45 ft. sup.	5 1	5 9	6 11
100 ft. sup.	5 6	6 9	8 10

Extra sizes, i.e., Plates exceeding 100 ft. sup. or 96 in. high or 160 in. wide.

Glazing for Glazing purposes per ft. sup.

	s. d.
Not exceeding 135 ft. sup. or 250 in. one way or 135 in. both ways	8 4
180 ft. sup. or ,, ,,	11 3
200 ft. sup. or ,, ,,	16 0

Plates exceeding 200 ft. sup., prices on application.

The usual thickness of Polished Plate is about ¼ in., but if required in the following special thicknesses in Glazing for Glazing quality the undermentioned extra charges will be made :—

⅛ in.–⅜ in. ⅜ in.–⅝ in. ¼ in. bare ¼ in. exact ⅝ in.–¾ in. ⅜ in. exact	... 6d. per ft. super
⅝ in.	... no extra charge

The Builder

CURRENT RATES OF WAGES

AS FROM FEBRUARY 4, 1952. **(Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.)**

KEY TO SCHEDULE OF GRADE RATES.

Grade Classification,	A	A1	A2	A3
Craftsmen	3/4½	3/4	3/3½	3/3
Labourers	2/11	2/10½	2/10	2/9½

Town.	Grade.
Aberavon	A
Aberdare	A
Abergavenny	A
Abingdon	A2
Accrington	A
Addlestone	A
Aldeburgh	A2
Aldershot District	A2
Alfreton U.D.	A
Alnwick	A1
Altrincham	A
Amble	A1
Amersham	A1
Ammanford	A
Andover	A2
Ardingly	A2
Arundel	A2
Ascot	A2
Ashby-de-la-Zouch U.D.	A
Ashby Woulds U.D.	A
Ashford (Kent)	A2
Ashford (Middlesex)	A
Ashington	A
Ashtead	A
Ashton-under-Lyne	A
Aspatria and Brayton	A
Atherstone (parts of)	A1
Aylesbury	A2
Aylesby (Yorks)	A
Aylesham	A2
Bagshot	A2
Bakewell U.D.	A2
Banbury	A2
Barnard Castle U.D.	A
Barnoldswick U.D.	A1
Barnsley	A
Barrow-in-Furness	A
Barrow-upon-Soar R.D. (exc. Thrussington A2)	A
Barry	A
Basford R.D. (exc. Willoughby-on-the-Wolds A2)	A
Basingstoke	A1
Bath	A
Batley	A
Baxterley	A1
Beaconsfield & District	A1
Beamish	A
Bearl	A
Bearpark	A
Beccles	A2
Bedale R.D.	A
Bedford	A
Bedlington	A
Bedwas	A
Beeston & Stapleford U.D.	A
Belper U.D.	A
Belton	A
Berkhamsted	A
Berrington	A1
Berwick District	A
Beverley	A
Bexhill-on-Sea	A2
Biggleswade	A2
Billericay	A
Billing	A
Billingham U.D.	A
Bishthorpe	A
Birchington	A2
Birkenhead	*
Birmingham C.B.	†A
Bishop Auckland	A
Bishop's Stortford	A
Bispham	A
Blackburn	A
Blackpool	A
Blackwell R.D.	A
Blaydon U. D.	A
Blidworth	A
Blyth	A
Bognor Regis	A2
Boldon U.D.	A
Bolsover U.D.	A
Bolton	A
Bourne End	A1
Bournemouth District	A
Bracknell	A2
Bradford	A
Bradford-on-Avon	A2
Braintree	A2
Breconshire, County of	‡A2
Brent Knoll	A2
Brentwood	A
Bridlington	A
Brierfield	A
Brighouse	A
Brighton	A
Bristol	A
Broadstairs	A2
Bromsgrove U.D.	A
Brough	A
Broughton (Cheshire)	A
Buckley	A
Bungay	A2
Burnham-on-Crouch	A2
Burnley	A
Burton-on-Trent C.B.	A
Bury	A
Bury St. Edmunds	A1
Buxton	A1
Byfleet	A1
Calder Valley	A
Cambridge	A
Cannock U.D.	A
Canterbury	A2
Cardiff	A
Cardiganshire, County of	‡A2
Carlisle	A
Carmarthenshire, Cnty.of	‡A2
Carnarvonshire, Cnty of	‡A3
Carnforth	A
Castleford	A
Caterham	A
Chapel-en-le-Frith	A1
Charmy Down	A
Chatham & District	A1
Cheadle (Staffs) R.D.	A
Chelmsford	A
Cheltenham	A
Chepstow	A1
Chertsey	A
Chester	A
Chesterfield M.B.	A
Chesterfield R.D.	A
Chester-le-Street U.D.	A
Chichester	A2
Chippenham (inc. Chippenham Within and Hardenhuish)	A2
Chorley	A
Clacton	A1
Cleethorpes	A
Clevedon	A1
Cleveleys	A
Clitheroe	A
Coalville U.D.	A
Cobham (Surrey)	A
Colchester	A
Colne	A
Colwyn Bay	A1
Congleton	A1
Consett	A
Conway	A1
Cornwall, County of	‡A2
Coventry C.B.	A
Cranbrook	A2
Cranleigh	A2
Crawley (Sussex)	A2
Crewe	A
Cromer	A1
Crowborough	A2
Cuckfield	A2
Dalton-in-Furness	A
Darlington District	A
Darwen	A
Deal	A2
Denbigh Town	A2
Derby C.B.	A
Devizes	A2
Devon, County of	‡A2
Dewsbury	A
Didcot	A2
Diss	A2
Doncaster C.B.	A
Dorking	A1
Dorset, County of (excepting Poole and Wimborne A1)	A2
Dover	A2
Dovercourt	A
Driffield U.D.	A1
Droitwich M.B.	A1
Dudley M.B.	A
Dunstable	A
Durham City	A
Eastbourne	A1
E. Glam. & Mon. Val.	A
East Grinstead District	A2
Eastwood (Notts.) U.D.	A
Ebbw Vale & District	A
Edenbridge	A2
Ely	A2
Epping	A
Exeter	A1
Fakenham	A2
Falmouth	A2
Fareham	A
Faversham	A2
Felixstowe	A1
Filey U.D.	A
Fleetwood	A
Flint	A
Folkestone	A2
Frinton	A1
Frome	A1
Gainsborough R.D. (Mid. pt.)	A2
Gateshead	A
Gillingham (Kent)	A1
Glossop	A
Gloucester	A
Gloucestershire, Cnty. of	‡A2
Godalming	A2
Goole M.B.	A
Gosport	A
Grantham M.B.	A
Gravesend	A
Great Yarmouth	A
Grimsby C.B. & R.D. (part)	A
Grimsby R.D. (remainder)	A2
Guildford District	A2
Guilsborough	A1
Guiseley	A
Halesowen M.B.	A
Halifax	A
Halstead	A2
Haresfield	A1
Harlow	A
Harpenden	A
Harrogate	A
Hartlepool	A
Harwich	A
Haslemere	A2
Hastings	A2
Hatfield (Herts.)	A
Haywards Heath	A2
Hemel Hempstead	A
Henley-on-Thames	A2
Hereford	A2
Herefordshire, Cnty. of	‡A2
Herne Bay	A2
Hertford	A
Hexham U.D.	A
Heysham	A
High Wycombe	A1
Highworth	A2
Hinckley U.D.	A
Hitchin	A
Hoddesdon	A
Horley	A2
Horsham	A2
Horwich	A
Huddersfield	A
Hull	A
Hunstanton	A2
Huntingdon (Staffs)	A
Ilkley	A
Ingatestone	A1
Ipswich	A
Isle of Sheppey	A2
Isle of Thanet	A2
Isle of Wight	A2
Jarrow M.B.	A
Keighley	A
Kendal	A
Kenilworth U.D.	A
Kettering M.B.	A
Keynsham	A
Kidderminster M.B.	A
King's Lynn	A1
Kingskerswell	A1
Kingsteignton	A1
Kirkham	A
Knaresborough U.D.	A
Knowle	A1
Lancaster	A
Leamington M.B.	A
Leatherhead	A
Leeds	A
Leicester C.B.	A
Leighton Buzzard	A2
Letchworth	A1
Lewes	A2
Lichfield M.B.	A
Lincoln C.B.	A
Littlehampton	A2
Liverpool	*
Llandudno	A1
Llanelly	A
London	*
Long Eaton	A
Loughborough M.B.	A
Louth M.B.	A2
Lowestoft	A
Loxton	A2
Luton	A
Lyneham (Devon)	A2
Macclesfield	A
Maidenhead	A1
Maidstone	A1
Maltby	A
Maldon (Essex)	A1
Malvern U.D.	A2
Manchester	A
Manningtree	A1
Mansfield M.B.	A
March	A2
Margate	A2
Market Harborough	A1
Maryport	A
Matlock U.D.	A1
Melksham	A2
Melton Constable	A2
Melton Mowbray U.D.	A1
Merthyr	A
Middlesbrough	A
Middleton	A
Middlewich	A
Milford Haven	A1
Morecambe	A
Morley	A
Mundesley	A2
Nantwich	A
Nelson	A
Newark-on-Trent R.D.	A1
Newbury	A2
Newcastle-on-Tyne	A
Newcastle-under-Lyme	A
New Forest District	A1
Newmarket	A1
Newport, Mon.	A
Newport Pagnell	A2
Newton Abbot	A1
Northallerton Dist.	A
Northampton C.B.	A
North Shields	A
Norton Radstock	A1
Norwich	A
Nottingham C.B.	A
Nuneaton M.B.	A
Oakham U.D.	A2
Oldham	A
Ongar	A
Ormskirk	A
Ossett and Horbury	A
Oxford	A
Oxted	A1
Paignton	A1
Peterborough	A
" Soke	A1
Pickering	A3
Plymouth	A
Pontefract	A
Pontypridd District	A
Portishead	A
Portland Stoneyards	A
Portsmouth	A
Port Talbot	A
Preston	A
Pudsey	A
Pulborough	A2
Radnorshire, County of	‡A2
Ramsgate	A2
Rayleigh	A
Reading	A
Redcar B.	A
Redditch U.D.	A
Redhill and Reigate	A
Ripon	A3
Rochdale	A
Rochester	A1
Rotherham	A
Rugby M.B.	A
Saffron Walden	A2
St. Albans	A
St. Helens	A
St. Neots	A2
Salisbury City	A2
Salisbury Plain	A2
Sawbridgeworth	A
Saxmundham	A2
Scarborough	A
Scunthorpe	A
Selby	A
Sevenoaks	A1
Sheerness	A2
Sheffield	A
Shipley	A
Shoeburyness	A
Shoreham	A
Shrewsbury M.B.	A
Sittingbourne	A2
Skegness U.D.	A1
Skipton U.D.	A
Sleaford U.D.	A2
Slough	A1
Smethwick C.B.	†A
Snettisham	A2
Somerset, County of	‡A2
Southampton	A
Southend-on-Sea Dist.	A
Southport	A
South Shields C.B.	A
Spalding U.D.	A2
Stafford M.B.	A
Staines	A
Stamford M.B.	A1
Stantonwick	A
Stevenage	A
Stockport	A
Stockton R.D.	A
Stockton-on-Tees	A
Stoke-on-Trent C.B.	A
Stoke Orchard	A1
Stourbridge M.B.	A
Stourport U.D.	A
Stowmarket	A1
Stratford-on-Avon M.B.	A1
Sunderland District	A
Sunningdale	A1
Sutton Coldfield M.B.	A
Swaffham	A2
Swanage	A2
Swansea	A
Swindon	A1
Swinton U.D.	A
Tamworth M.B.	A
Tenterden	A2
Tewkesbury	A1
Thames Haven	A
Thetford	A2
Thorpe Bay	A
Thurrock U.D.C. Area North of, to Billericay	A
Tilbury	A
Todmorden	A
Tonbridge	A1
Torquay	A1
Totnes	A1
Trowbridge	A2
Tunbridge Wells	A1
Tynemouth C.B.	A
Uppingham (Salop)	A1
Uttoxeter U.D.	A2
Wakefield	A
Wallsend B.	A
Walsall C.B.	A
Walsden	A
Walton-on-Naze	A1
Ware	A
Warminster	A2
Warrington	A
Warwick M.B.	A
Wellington R.D.	A1
Wells (Norfolk)	A2
Welwyn	A
Welwyn Gar. City	A
West Bromwich C.B.	A
Westbury	A2
Westcliff-on-Sea	A
Westerham	A1
Weston-super-Mare	A1
Weybridge	A
Weymouth	A1
Whitby U.D.	A1
Whitstable and District	A2
Wickford	A
Widnes	A
Wigan	A
Wigton	A2
Willington	A
Wilmslow	A
Wilts. County of	‡A2
Winchester	A1
Windermere	A3
Windsor and Eton	A1
Wisbech	A2
Witham	A1
Woking (District)	A1
Wokingham	A2
Wolverhampton C.B.	A
Woodbridge	A2
Worcester C.B.	A
Workington	A
Worksop M.B.	A
Worthing	A2
Wrexham (incl. Cefn)	A
Wroughton	A1
Wylam	A
Wymondham	A2
York	A

* For Birkenhead, Liverpool, and London the rates are:—Craftsmen, 3s. 6d.; Labourers, 3s. 0½d. In the case of London the rate beyond the 12-mile radius is:—Craftsmen, 3s. 5½d. Labourers, 3s. 0d. † Plus 2d. per working day. ‡ This is the County rate and applies except where higher grades are stated.

NOTE.—Carpenters, Joiners and Plumbers in all towns and districts receive 2d. per day Tool Allowances.

WOMEN'S RATES.—In all districts throughout the country the rate of wages for women engaged in craft processes is 2s. 5d. per hour. Women introduced to carry out work other than craft processes, 2s. 1d. per hour.

For Building Trade Wages in Scotland see page 349

HOUSING AND THE SMALL BUILDER

Minister Congratulates Doncaster

THE following letter has been sent by the Minister of Housing and Local Government to the Mayor of Doncaster:—

Dear Mr. Mayor,—I have had brought to my notice some of the excellent results of your scheme for letting house building contracts of a few houses to small local builders with a promise of further contracts to follow. I want to offer my congratulations on the successful way in which your Council and their officials must have been collaborating with the builders to get the houses built.

My attention has been drawn to three cases in particular of houses erected on the Cantley estate by Hemsworth Bros., Dearne Construction Co., and Rushton Contractors, Ltd., and I enclose a copy of a letter (not reproduced) which I have sent to each of these firms. I hope you will take the first suitable opportunity of letting your Council know that I am very grateful to them also for their part in these achievements.

NEWS IN BRIEF

Lectures on Copper

The use of copper for roofing and for water, gas and sanitation services has resulted in increased demands for lectures and demonstrations by the Copper Development Association's building engineer, Dr. E. Carr, and his assistants. These lectures can be illustrated with sound films or lantern slides where protection facilities are available. Principals of technical colleges and secretaries of masters' and operatives' organisations, etc., wishing to take advantage of this service, which is free, are advised to make early application to the Copper Development Association, Kendals Hall, Radlett, Herts.

Sidney Gaze Memorial Fund

The annual prize presentation from the Sidney Gaze Fund to students at the various Technical Colleges in the South-Western area of the L.M.B.A. will take place on September 24 at Zeeta's Restaurant, Kingston-on-Thames, preceded by luncheon. The prizes will be presented on this occasion by Mr. N. S. Farrow, chairman of the L.M.B.A. Apprenticeship Committee, who will be supported by the president of the Association, Mr. D. E. Woodbine Parish. The luncheon will also be attended by the Principals of Technical Colleges and by the Heads of the Building Departments.

Supply of Electricity

A review of action taken on the report of the electricity supply productivity teams has been issued by the Anglo-American Council on Productivity, U.K. Section, 21, Tothill-street, S.W.1. Entitled "Electricity and Productivity," this statement is the sixth of the follow-up statements covering the report on electricity supply.

Baths By Rail

Specially fitted containers for the conveyance of porcelain-enamelled cast-iron baths have been devised by The Commercial Superintendent, N.E. Region, British Railways, in collaboration with the Hull firm of Ideal Boilers and Radiators, Ltd. This type of container will be demonstrated to any firm which contemplates using them. Requests should be made to the Commercial Superintendent of the Region at York.

Blackburn Development Plan Approved

The Minister of Housing and Local Government has approved, with modifications, the development plan for Blackburn C.B., Lancs. The plan, as approved, will be on view in the Council Offices.

Works Dispute Investigation

Mr. W. H. Forsdike, C.B.E., is a member of the committee of investigation which is considering the stoppage of work at Park Royal Vehicles factory at Willesden. Professor D. T. Jack (chairman) and Mr. H. M. Moulden are the other members. Mr. Forsdike is chairman of the N.J.C. for the building industry.

Government Report

"Brick and Fireclay" (Volume 1, Trade F) is the title of a report issued by the Board of Trade in the series of final reports on the census of production for 1948, and can be obtained from the Stationery Office, price 3s.

TRADE NEWS

Price Reduction

R. A. Lister and Co., Ltd., announce a reduction in the price of their Start-O-Matic plant from £433 to £375, approximately a 12½ per cent. cut.

Aluminium Price Reductions

British Aluminium Co., Ltd., announces price reductions, as from September 1, amounting to nearly eight per cent. for bulk quantities, for the special range of thin gauge sheet and coiled strip for boxmaking and capping purposes.

Prefabricated Houses at Salisbury

On September 1, the Mayor of Salisbury lunched with members of Reema Construction, Ltd., of 199, Piccadilly, W.1, in one of the company's own "Reema" houses which was erected at Salisbury in the course of normal production and working hours within 19 working days between August 6 and 27. (The Reema method of house construction was described and illustrated in *The Builder* of November 18, 1949.)

So you've decided on

SLIDING DOORS

HOW about the door gear? There's a set for every need in the KING range—and every set has 'plus' features proved in thousands of installations – basic advantages in design, material, workmanship and finish that mean smooth running and long life. So when you specify door gear, specify and insist upon KING gear and make a tip-top job of it.

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SLIDING DOOR GEAR

Write for illustrated booklets to

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NEW COMPANIES

THE FOLLOWING NEW COMPANIES, registered in England, have been announced by Jordan and Sons, Ltd., company registration agents.

R. Densham and Sons, Ltd. (509189). Regd. June 25. 120, Fortune Green-rd., N.W.6, bldrs., etc. Nom. cap.: £7,000. Dir.: S. F. Densham, 34, Ravensdale-av., N.12.

Worledge and Pilgrim, Ltd. (509203). Regd. June 25. 39, Laurien-rd., Croydon, Surrey, bldrs., etc. Nom. cap.: £1,000. Dir.: F. H. Worledge, 39, Laurien-rd., Croydon, Surrey.

County Bldrs. (Worcester), Ltd. (509128). Regd. June 24. Nom. cap.: £2,000. Dir.: W. F. Matthews, The Meadows, Bromyard-rd., Worcester.

Ellington Construction Co., Ltd. (509218). Regd. June 26. 41, John Dalton-st., Manchester, 2, bldrs., engrs., etc. Nom. cap.: £2,000. Dir.: S. Billington, 4, Lime-gr., Bispham, Blackpool.

D.R. and B. (Salisbury Plain), Ltd. (509245). Regd. June 26. 104, High Holborn, W.C.1, bldrs., etc. Nom. cap.: £2,000. Dir.: E. J. Bent, Sleights-cottage, Maycot, Chippenham, Wilts.

A. S. Cooke and Co., Ltd. (509480). Regd. July 4. Paganhill, nr. Stroud, Glos., bldrs., etc. Nom. cap.: £1,500. Dir.: A. C. Dickinson, Lypiatt Villas, Bisley-rd., Stroud, Glos. (gov. dir.).

C. D. Howard (Contractors), Ltd. (509486). Regd. July 4. 99, Eastwood-rd., Kimberley, Notts, bldrs. and contractors. Nom. cap.: £4,000. Dirs.: C. D. Howard (mang. dir.) and Mrs. A. M. Howard.

Westminster Building Supplies, Ltd. (509510). Regd. July 4. 191, Westminster Bridge-rd., S.E.1. Nom. cap.: £1,000. Dir.: A. P. Cousins, 15, Ravensdon-st., S.E.11.

E. A. Bromfield and Co. (Sutton), Ltd. (509524). Regd. July 5. 52, Sutton Common-rd., Sutton, Surrey, bldrs., etc. Nom. cap.: £500. Dir.: E. A. Bromfield, 27, Strathearn-rd., Sutton, Surrey.

French and Pizey Co., Ltd. (509527). Regd. July 5. 15, Blue Anchor-la., Bermondsey, S.E.16, demolition contractors, steeplejacks, etc. Nom. cap.: £3,000. Dir.: F. G. Maynard, 36, Storks-rd., S.E.16.

A. Hoyle, Ltd. (509579). Regd. July 7. Bldr., South Crosland, nr. Huddersfield, Yorks. Nom. cap.: £7,000. Sub.: J. R. Hoyle, 15, Royds-av., Linthwaite.

L. Reade (Plumbers), Ltd. (509580). Regd. July 7. 32, Musters-rd., W. Bridgford, Notts, plumber. Nom. cap.: £5,000. Dirs.: L. Reade and Mrs. F. E. Reade, 32, Musters-rd., W. Bridgford.

T. Nicholson (Leamington), Ltd. (509638). Regd. July 9. 24, Regent-st., Leamington Spa, Warwicks, bldr. Nom. cap.: £1,000 in £1 shares. Dirs.: T. Nicholson and Mrs. G. M. Nicholson, 27, Morton-st., Leamington Spa.

A. G. Ellis, Ltd. (509587). Regd. July 8, 1952. 288, Hedge-la., Palmers Green, N.13, to carry on business of decorators, consultants, bldrs., etc. Nom. cap.: £1,000 in £1 shares. Dirs.: A. G. Ellis (permt.) and Mrs. I. M. Ellis, 3, Ash-gr., Palmers Green, N.13.

R. A. Jewell, Ltd. (509665). Regd. July 10. Bank-chbrs., 2, Putney-hill, S.W.15, bldrs., etc. Nom. cap.: £100. Dirs.: R. A. Jewell and Mrs. F. M. Jewell, 77, Chatsworth-rd., Cheam.

Walt Makings, Ltd. (509693). Regd. July 11. 44, St. Cuthberts-rd., Nottingham, bldrs., etc. Nom. cap.: £5,000. Dir.: W. Makings, 44, St. Cuthberts-rd., Nottingham.

W. H. Sothcott, Ltd. (509701). Regd. July 11. 121, Cambridge-gdns., N. Kensington, W.10, bldrs., etc. Nom. cap.: £2,000. Dir.: W. H. Sothcott, 83, Oxford-gdns., N. Kensington, W.10.

R. J. Finch and Co., Ltd. (509789). Regd. July 15. 70, Church-st., Hunstanton, bldrs., etc. Nom. cap.: £1,000. Dirs.: R. J. Finch and Mrs. E. A. Finch, 14, Glebe-av., Hunstanton.

V. G. Croad, Ltd. (509806). Regd. July 16. 6a, High-st., Fareham, Hants, bldrs., etc. Nom. cap.: £15,000. Dirs.: V. G. Croad and Mrs. E. M. Croad, 72, High-st., Fareham, Hants.

Braithwaites (Harrogate), Ltd. (509808). Regd. July 16. 10, Clarendon-rd., Leeds, plumbers, glaziers, etc. Nom. cap.: £500. Dir.: E. A. Braithwaite, Vine-hse., Gt. Ouseburn, Yorks.

A. J. Simmons and Sons (Seaford), Ltd. (509822). Regd. July 17. Bldrs., 16, Dane-rd., 5, Broad-st. and 96, Chichester-rd., Seaford, Sussex. Nom. cap.: £7,000. Dir.: A. J. Simmons, 69, Chichester-rd., Seaford.

F. North (Brighton), Ltd. (509878). Regd. July 18. Bldrs., etc. Nom. cap.: £750. Sub.: G. B. Gates, 27, Palmiera-mans., Church-rd., Hove, 3.

G. A. Martin, Ltd. (509879). Regd. July 18. Grove Works, Willoughby-gr., Tottenham, N.17. bldr. Nom. cap.: £500. Dirs.: G. A. Martin and Mrs. I. M. Martin, 23, Eleanor-rd., Bowes Park, N.11.

PERSONAL COLUMN

MR. S. WRIGHT has been appointed manager of the depot opened recently by Sissons Paints (Yorks.), Ltd., at 10, Sycamore-street, Sheffield, 1. Mr. Wright has represented his firm in Northern and Midland Counties for a considerable period. He has had experience in all branches of the industry, acquired over 36 years service with the parent company, Sissons Brothers and Co., Ltd., of Hull and London.

OVERSEAS BUILDING

[From Our Own Correspondents]

Colombia.—The Government of Colombia is to build a six million peso hydro-electric plant near the new Neusa dam at Zipaqira. The plant will provide power for industry in Bogota and its environs. A large hydro-electric scheme is also planned for the Calima River which will supply power for the rich area of the Valle del Cauca. The Calima project is for 100,000 kilowatts and will cost about (U.S.) $23,000,000. The province of Tolima is also interested in hydro-electric potentialities and is studying designs in order to get some firm idea of the type of plant necessary for the territory. . . . Tenders are also being issued for the construction of six silos which is being financed by the Export-Import Bank. . . . A large railway project is also being carefully studied. The project has the support of the National Association of Industrialists and the Ministry of Public Works. Finance is being sought from the U.S.A.

Portugal.—Portugal is to embark on a rural electrical scheme designed to bring power to villages and small country towns. The Minister of Economy, in a recent speech, confirmed this when he said that his Government's plans for the next few years would give high priority to the extension of electricity to rural areas. This, in effect, means the building of power stations, depots, and works throughout the whole country and envisages about 10 years' work. Last month a sub-station was opened at Sacavem which is to handle power from the hydro-electric stations for Lisbon, Setubal and the south of the country. . . . In addition to this scheme and running parallel, is a scheme for the construction and repair of roads and bridges. About £3,000,000 is to be spent on roads and £1,250,000 on bridges. Repair work totals about £1,500,000.

South Africa.—The Union of South Africa Tender and Supplies Board has issued tenders for a private automatic exchange for Defence Headquarters, Pretoria. Tenders should reach the chairman of the Board, 271, Visagie-street (P.O. Box 371), Pretoria, by October 2.

Uruguay.—The Department of Architecture of the Municipality of Montevideo, Uruguay, has invited tenders for the supply and erection of up to 500 prefabricated houses. Designs of these houses are important and should be suitable to the climate and environment of this South American Republic. British firms which produce this type of dwelling have every chance of securing the contract providing that the U.K. Government will allow the transaction. . . . The Usinas Electricas y Telefonos del Estado, of Uruguay, has issued tenders for the construction of the first stage of the Western Circuit of the National Electric Power Network. Closing date of this tender is fixed at present at September 23, 1952. The scheme, as far as is known, consists of transformer sub-stations to be built at Dolores, Fray Bentos, Mercedes, Paysandu, and Young, and interconnecting transmission lines with the hydro-electric generating station of Rincon del Bonete. The Board of Trade has a copy of the original specifications and amendments in Spanish. It is stated also that United Kingdom firms should be able to supply replacements on the spot and should have facilities for maintenance.

The SCOTTISH BUILDER

Preservation of Fine Buildings

SPEAKING on the "Preservation of Works of Art" at the recent Edinburgh Conference of the Institute of Public Administration, the EARL OF CRAWFORD AND BALCARRES, chairman of the Royal Fine Art Commission, declared that "we have destroyed and are destroying more of our own beauty than Hitler was able to do." To-day Scotland had less left of its old, fine, sturdy architecture than any other country in Europe, and he thought the time had come when national pride should be stirred and appropriate action taken.

Lord Crawford made a plea for the protection of good domestic architecture in Scotland and for the preservation of some fine old houses threatened with destruction. Such destruction as was going on to-day up and down the country he described as "ruthless, relentless, and reckless."

Speaking of the work of the Royal Fine Art Commission, the Earl said that at its meetings he constantly tried to bear in mind the danger of trying to create an official style, because an official style in architecture was "just as devastating as it would be in visual arts." The degree of architectural control over public buildings should be overall guidance, over-all direction, over-all proportion and balance, rather than control of detail.

The Royal Fine Art Commission was an advisory body; it was completely independent of any department, responsible only through the Treasury to Parliament; and because it was an advisory body its views were, more often than not, accepted. Its personnel was broad and wide, and contained representatives of all branches and schools of thought in the architectural world.

He could not help wondering whether, now that public authorities had an ever-increasing control over the arts, some such system as the Royal Fine Art Commission's system might be more extensively used than had been employed up to date. Even if it was not, it was important that public administrators should always look outside for help and advice from bodies who had wide experience in the matters with which they were concerned.

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SCOTTISH BUILDING TRADE WAGES

FOLLOWING are rates of wages authorised by the Scottish National Joint Council as from February 4, 1952. They apply to the whole of Scotland, including the islands of Orkney, Shetland, etc.

Grade A: Craftsmen, 3s. 4½d., Labourers, 2s. 11d.

For apprentices, the rates are:

Year.	Percentage of Craftsman's rate.	For week of 44 hours. s. d.
1st	25	37 1½
2nd	33⅓	49 6
3rd	50	74 3
4th	66⅔	99 0
5th	75	111 4½

For female labour, the rates are:

	s. d.
Operatives on craft operations (at end of probationary period)	2 11
Operatives on labouring operations (at end of probationary period)	2 7½

NEW BUILDINGS

Aberdeen.—Aberdeen Planning Com. approved an application by the Congregational Church for the erection of a church at Longwalk-rd., Mastrick.

Aberdeen.—The Special (Licensing of Building Work) Com. of Aberdeen Corpn. have decided to support an application by Associated British Cinemas, Ltd., for a licence to complete a cinema being built in Shiprow, Aberdeen, at an estimated cost of £37,900.

Argyllshire.—Plans are in hand for 50 houses to be erected by the Scottish Special Housing Association, Ltd. Architect, Mr. James G. Bent, F.R.I.B.A., 15, Palmerston-pl., Westend, Edinburgh.

Ayr.—Warrant granted by Ayr Dean of Guild Court for an extension to the factory of William C. Gray & Sons, Ltd., Newton Carpet Works, Ayr, at a cost of £28,450.

Buckhaven.—Fifeshire C.C. has had sketch plans prepared for a sec. sch. to cost £250,000. Architect, Mr. R. S. Lawrie, A.R.I.B.A., County-chbrs., St. Catherine-st., Cupar.

Burnfoot.—Roxburghshire C.C. is to have plans prepared for a prim. sch. to cost £200,000. Architect, Mr. Harry W. MacDonald, L.R.I.B.A., A.R.I.A.S., County-chbrs., Newtown, St. Boswell's.

Dalneath.—Inverness-shire C.C. is to have plans prepared for a prim. sch. Architect, Mr. Alexander Cullen, O.B.E., F.R.I.B.A., County-chbrs., Inverness.

Edinburgh.—Warrant granted in Dean of Guild Court for the erection of two new hospital ward units and a service link unit at the Princess Margaret Rose Hospital, Fairmilehead. The new extension will cost approximately £100,000 and will be a two-storeyed prefabricated permanent construction, linked to the main hospital by a corridor.

Forfarshire.—Sketch plans for a fire stn. have been prepared by Mr. J. Graham, Burgh Architect, Master of Works Office, Municipal-bldgs., Montrose.

Glasgow.—Plans are in hand for new buildings at Paisley-rd., Govan, for Cassidy & Co., Ltd., for which the architects are Stewart & Patterson, F.R.I.B.A., 110, Blythswood-sq., Glasgow, W.C.2.

Hilton.—Inverness-shire C.C. is to have plans prepared for a prim. sch. Architect, Mr. Alexander Cullen, O.B.E., F.R.I.B.A., County-chbrs., Inverness.

Kincardineshire.—C.C. is to erect fire stn. at Laurencekirk, for which plans are to be prepared by their architect, Mr. Allister Sturrock, County-chbrs., Stonehaven.

Renfrewshire.—16 houses to be erected by Barrhead Corpn. at Kilburn-st.

Roxburghshire.—C.C. is to have £16,650 extension carried out at the High School, Hawick. Architect, Mr. Harry D. MacDonald, L.R.I.B.A., County-chbrs., Newtown, St. Boswell's.

Salsburgh.—Lanarkshire C.C. is to have a scheme of 34 houses erected for which the architect is Mr. Samuel MacColl, F.R.I.B.A., County-chbrs., Beckford-st., Hamilton West.

Scottish Railways.—British Railways (Scottish Region) announce that passenger station improvements at Haymarket (Edinburgh), Newton-on-Ayr (Ayrshire), Corkerhill (Glasgow), and Mosspark (West) (Glasgow), costing approximately £56,000, have recently been authorised.

The Builder

FUTURE CONSTRUCTION

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

SEPTEMBER 8.

***†Miteham B.C.**—66 maisonettes at Baron House estate, London-rd. B.E. & S., Town Hall. Tenders by October 4.

SEPTEMBER 9.

***†Bromley B.C.**—64 houses and 10 old people's dwellings at Blackbrook estate. B.E., Municipal Offices. Dep. £2 2s.

***†Merthyr Tydfil B.C.**—Dining-room and kitchen at county grammar school. B.E. & S., Town Hall. Dep. £2. Tenders by September 27.

SEPTEMBER 12.

†Watford R.D.C.—60 houses at Holywell estate. B.E. & S., Town Hall.

***Wednesfield U.D.C.**—House and garage at junction Nordley-rd. and Vicarage-rd. T. A. Peacock, E. & S., 29, Bolton-rd. Dep. £1 1s.

SEPTEMBER 13.

***†Durham County Police Authority.**—Garages. G. R. Clayton (F.), County A., Court-la., Durham.

***†Durham C.C.**—Alterations and additions to form children's home at Hartburn Lodge, Stockton-on-Tees. G. R. Clayton (F.), County A., Court-la., Durham.

***†Essex C.C.**—Hutted classrooms, Gobious County Primary School, Romford. H. Conolly (F.), County Architect, Chelmsford.

***†Essex C.C.**—Additional science laboratory, Maldon Grammar School. H. Conolly (F.), County Architect, Chelmsford.

***†Essex C.C.**—Primary school, Harrington-rd., Leytonstone, E.11. H. Conolly (F.), County Architect, Chelmsford.

Felling (Dur.) U.D.C.—20 houses, etc., near Chilside-rd. Chief Housing Officer, Council-bldgs. Dep. £2 2s.

***Stepney B.C.**—External redecoration of Goslinghse., contract 713, and Roche-hse., contract 714. B.E. & S., 227-233, Commercial-rd., E.1. Dep. £2 2s.

†Stockport T.C.—Eight flats in Chaucer-ave., Houldsworth estate. B.S., Town Hall. Tenders by October 4.

SEPTEMBER 15.

***†Hants C.C.**—Junior school at South View, Basingstoke. County A. Dep. £2 2s.

SEPTEMBER 16.

***Bucks C.C.**—House and office for district nurse at Shabbington. County A., County Offices, Aylesbury. Tenders by September 30.

Droitwich (Worcs) R.D.C.—Six houses at Tibberton and 4 at Bradley Green. R. F. Fry, Surveyor. Dep. £2 2s.

***Northants C.C.**—Adaptation of 20, The Headlands, Kettering, as home for aged. County A.

SEPTEMBER 17.

Lutterworth (Leics) R.D.C.—Six houses at South Kilworth. Surveyor. Dep. £2 2s.

SEPTEMBER 18.

***Barnes B.C.**—Seven lock-up garages at Railway-at., S.W.13. B.E. & S., Municipal Offices, Sheen-la., S.W.14.

Chepstow (Mon.) R.D.C.—Six houses at Fair Oak, Tintern. Thomas & Morgan & Partners, architects, 23, Gelliwasted-rd., Pontypridd. Dep. £3 3s.

***†Leeds Reg. Hosp. Board.**—New X-ray accomodation at County General Hospital, Park Lodge-la., Wakefield. Architect to the Board, Park-parade, Harrogate. Dep. £2 2s. Tenders by October 15.

Liverpool T.C.—(a) Ten houses, Newburn-st., Walton; (b) 8, Tetlow-st. and Walton-la.; (c) 4, Perth-st. and Dunkeld-st., Everton, 5; (d) 2, Bedmin-rd., Walton. City A., Blackburn-chbrs., Dale-st., Kingsway, Liverpool, 2. Dep. £2 2s. each contract.

SEPTEMBER 19.

Leyton B.C.—24 maisonettes and 3 flats at Park Grave-rd. B.E. & S., Town Hall. Dep. £2 2s.

***†Southgate B.C.**—Five houses and 11 flats at the junction of Arundel-gdns. and Haslemere-rd., N.21 (Contract A); 2 houses in Cowper-gdns., N.14 (Contract B). B.E. & S. Dep. £2 2s. Tenders by October 20.

SEPTEMBER 20.

***March U.D.C.**—14 bungalows, Deerfield-rd. estate. W. S. Pickett, Architect & Surveyor. Dep. £2 2s.

SEPTEMBER 22.

Bideford (Devon) T.C.—Eight houses at Pynes-la. estate. H. J. Deane, Boro' S. Dep. £2 2s.

Cardiff (Glam.) R.D.C.—(a) Eight houses, Llanedeyrn; (b) 10 houses and four flats, South-rd., Sully. S. P. Youldon, E. & S. Dep. £3 3s. each contract.

Ellesmere Port U.D.C.—70 houses in Mill-la. (Contract 135) and 34 houses in Overpool-rd. (Contract 136) at North Whitby housing estate. E. & S., Queen-st. Dep. £3 3s. each contract.

***†Lincs C.C.**—New lavatory block and classrooms, Sleaford Alveys C. of E. School. County A. Tenders by October 13.

***Maidenhead Boro'.**—Bungalow with temporary office accommodation, Braywick-rd. cemetery. B.E. & S. Dep. £2.

***Sittingbourne and Milton U.D.C.**—36 flats on Canterbury-rd. housing estate. E. & S., High-st. Dep. £3 3s.

Smethwick T.C.—Eight maisonettes at Norman-rd. B.E. & S., Council House. Dep. £2 2s.

***Wokingham B.C.**—86 dwellings at Norreys Barn estate. Eric G. V. Hives (L.), Council's A., 3, Corkst., Reading. Dep. £2 2s.

SEPTEMBER 24.

***Barnsley C.B.**—Five pairs s.d. police houses on various sites. E. & S., Town Hall. Dep. £2 2s.

N. Ireland Hsg. Trust.—296 dwellings at Falls. No. 3 Trust Offices, 12, Hope-st., Belfast. Dep. £3.

SEPTEMBER 29.

***†Hornsey Boro'.**—14 flats and 6 shops, Stroud Green-rd., N.4. G. A. Pentecost, B.E. & S. Tenders by October 31.

***Slough Boro'.**—12 aged persons' cottages, Priory estate, Burnham. B.E. Dep. £2 2s.

Beccles (Suffolk) T.C.—26 houses at Banham-rd. Housing Surveyor. Dep. £1 1s.

Scunthorpe B.C.—36 flats on New Brumby estate. E. & S. Dep. £2 2s.

SEPTEMBER 30.

Cwyrfai (Caernarvon) R.D.C.—24 houses at Groeslon with site preparation works; four at Rhiwlas with site preparation works; two at Penisarwaen. J. Isgoed Williams, architect, Regent House, Penmaenmawr. Dep. £2.

***South Cambs R.D.C.**—2 houses and 2 bungalows at Horseheath. T.C. Dep. £2 2s.

OCTOBER 1.

***Guildford R.D.C.**—47 dwellings at Cardinals estate, Tongham. E. & S. Dep. £8 8s.

***Guildford R.D.C.**—Eight dwellings at Norwood-cl., Effingham. E. & S. Dep. £2 2s.

***Guildford R.D.C.**—10 houses at Holmbury St. Mary. Orman & Ptnrs., 106, High-st. Dep. £2 2s.

OCTOBER 2.

***Berkshire C.C.**—Classrooms, etc., Maidenhead Curls-la. school, Larchfield estate. County Architect, Wilton House, Parkside-rd., Reading. Dep. £2 2s.

***Croydon C.B.**—Dining-hall and servery, West Thornton School, Boston-rd. Chief Education Officer, Katherine-st. Dep. £1.

OCTOBER 4.

Thornton Cleveleys U.D.C.—58 houses on Marsh Hays estate, Thornton. H. Anderson, M.I.Mun.E., E. & S. Dep. £2 2s.

***Whitworth U.D.C.**—40 houses at Wallbank housing estate. A. Brocklehurst & Co., Martins Bank-chbrs., Waterfoot. Dep. £2 2s.

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OCTOBER 6.

***Guernsey States Hsg. Authty.**—36 flats at Victoria-ave. States E., States Office Annexe, Albert Pier. Dep. £2 2s.

OCTOBER 7.

***Camberwell B.C.**—Six flats at Gowlett-rd. Dir. of Hsg., Town Hall, Peckham-rd., S.E.5. Dep. £2 2s.

Wigan C.B.—Erection of an occupation centre at Scot-la., Newtown. B.E. Dep. £2.

OCTOBER 10.

***Harrow U.D.C.**—58 dwellings at Cannon Croft, Eastcote-rd., Pinner. J. H. Melville Richards, E. & S. Dep. £2.

NO DATE.

***Hemel Hempstead B.C.**—128 houses and 12 flats on three sites. A. H. Turner, B.E. & S., Market-sq.

Southampton C.B.C.—Erection of r.c. Civil Defence control centre. B.E. & S. Dep. £3 3s.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

SEPTEMBER 12.

***†Southampton C.B.C.**—Redecorations and repairs to Shirley Junior and Infants' School. Borough A. Dep. £1. Tenders by October 6.

***†Southampton C.B.C.**—Redecorations and repairs to Shaling Secondary School. Borough A. Dep. £1. Tenders by October 6.

SEPTEMBER 13.

Mexboro' U.D.C.—Supply of materials for 6 months ending March 31, 1953. S., Council Offices, Adwick-rd., Mexborough.

SEPTEMBER 15.

New Sarum City C.—Supply of building stores during 1953. City E., The Council House, Bourne Hill, Salisbury.

SEPTEMBER 20.

***Luton B.C.**—Repair of 2 fire-damaged houses at Hartsfield-rd. B.E. Dep. £2 2s.

ROADS, SEWERAGE AND WATER WORKS

SEPTEMBER 22.

Bullingdon R.D.C.—Site works for 30 houses at Horspath. J. E. Burfield, M.I.Mun.E., E. & S. Dep. £2 2s.

SEPTEMBER 29.

***Cuckfield R.D.C.**—Site preparation (contract No. 86), Pease Pottage housing site. A. Hutchings, E. & S. Dep. £2 2s.

OCTOBER 6.

Uckfield R.D.C.—Concrete service reservoir at Hilbre Mount. T.C., Council Offices, Beacon-rd., Crowborough. Dep. £10.

GENERAL BUILDING WORK

(LONDON)

Enfield.—FACTORY ALTERATIONS.—Alterations and additions to a factory at Gt Cambridge-rd. by E. W. Palmer & Partners, architects, 8, The Town, have been approved by U.D.C.

Enfield.—AGED PERSONS' DWELLINGS.—U.D.C. are to submit for Ministry approval a scheme prepared by council engineer for 31 units of self-contained accommodation for aged persons, caretaker's flat and communal dining facilities at Chapel-st. housing site. Estimated cost £30,000.

Enfield. — FACTORY EXTENSION. — U.D.C. has approved plans for extension to factory at corner of London-rd. and Gt. Cambridge-rd. by Chamberlain Industries, Ltd., whose head office is at Staffa-rd., E.10.

Hammersmith.—SHOPS.—B.E. is to erect 8 shops and 18 flats at Spring Vale estate.

Ilford.—FLATS.—72 flats are proposed by B.E. for Marks Gate estate.

Park Lane.—HOTEL EXTENSIONS.—Messrs. W. Curtis Green, R.A., Son and Lloyd, 5, Pickering-pl., St. James's-st., S.W.1, have designed an extension to the Dorchester. The building which is to be on the Deanery-st. side, will give additional bedroom accommodation. The building work will be carried out by Sir Robert MacAlpine.

Surbiton.—FLATS.—T.C. propose 16 flats for old people and 4 houses at Fairmead estate, Tolworth; also 4 old people's flats at Chessington Court estate. The architects are Clifford Culpin & Ptnrs., F.A., 3, Southampton-pl., W.C.1.

Twickenham.—FLATS.—207 flats are to be erected by The Bunting Construction Co., Ltd., 71, Acre-la., London, S.W.2, on the Butts Farm estate, at estimated cost £372,920.

Wandsworth.—FLATS.—144 flats are to be erected in Clapham-rd. for B.C. by C. H. James, architect, 5, Bloomsbury-st., W.C.1.

(PROVINCIAL)

Accrington.—T.C. approved layout for 101 houses at Burnley-rd., for executors of Mrs. E. A. Creasey, 52a, Blackburn-rd., Haslingden.

Ashton-under-Lyne.—B.C. to prepare scheme for new conveniences at "Corporation Arms," Guide Bridge; approved erection of three-storey flats on site of Crowhill Farm; three-storey flats on site of Charleston Mill; approved layout for 12 houses at Reyner-st.

Atherton.—U.D.C. approved erection of 152 flats and 36 three-bedroomed type houses.

Birmingham.—T.C. to acquire further sites for houses at Northfield.

Blackburn.—Blackburn and District Hospital Management Com. propose extensions at Withnell Hospital; temporary scheme of new suites of consulting rooms, with waiting hall and office accommodation at the Royal Infirmary; twin operating theatres at Queen's Park Hospital.

Blackrod.—U.D.C. to develop new housing site. J. E. Wood, S.

Boldon (Co. Durham).—J. Potts & Son, architects, John-st., Sunderland, have submitted plans to U.D.C. showing proposed development of land south of East Fields, Whitburn.—U.D.C. has received sanction to borrow £50,471 for 38 houses.

Bootle.—B.C. approved layout for Cabbage Inn Housing site.

Bridgnorth.—T.C. to issue block licence for 10 houses to S. A. Lowe (Bridgnorth), Ltd.; further licence for seven houses at a later date.

Carlisle.—Architects for proposed public house at Harraby, for the State Management Scheme, is J. W. Williamson, F.R.I.B.A., Chief A., Home Office, London. The contractor has not yet been decided.

Eston (Yorks). — Newcastle-on-Tyne Regional Hospital Brd., "Dunira," Osborne-rd., Newcastle-on-Tyne, are planning additions to hospital in Flatts-la., Normanby.—Alterations to be made to the "Cleveland Inn," Normanby, for which the architects are Kitching & Co., 21, Albert-rd., Middlesbrough.—A licence amounting to £47,000 is being issued to Smith's Dock Co., Ltd., South Bank, for additions to joiners' shop and frame shed, etc.

Gateshead.—Cackett, Burns Dick & McKellar, 21, Ellinson-pl., Newcastle, are architects for extensions to the brewery of J. Rowell & Co., Ltd.—Gateshead Corpn. has approved plans to build a stadium at a cost of £30,000. Plan by Boro' A., H. J. Cook.—Plans have been approved for the building of a new clinic at Gateshead. Architect, H. T. Cook, Boro' A.

Leek.—R.D.C. approved erection of 215 miners' houses at Baddeley Green.

Liverpool.—Reg. Hospital Brd. to invite tenders for adaptations at Liverpool Seaman's Orphanage, at £40,000.

Newcastle-on-Tyne.—Plans have been approved for 24 dwellings in Armstrong-rd. G. Kenyon, Cty. A., 18, Cloth-market, Newcastle.—A store is to be built in St. Andrew's-st., for Bulman & Leatherland, wholesale fruiterers, etc. Architects, Tasker & Child, Trinity-bldgs., New Bridge-st., Newcastle.—Alterations are to be made to premises of Hall, Forster & Co., Ltd., Temple-st. Architects, G. R. Reed, High Level Bridge End, Gateshead.

Northumberland.—E.C. to spend £10,835 on hostel accommodation at Hexham cty. gram. sch. Cty. A., C. C. Brown, County Hall, Newcastle-on-Tyne.

Northumberland.—Railway Executive are to reconstruct Seaton Delaval Railway Bridge.

Nottingham.—R.C. approved plans for conversion of premises at Chesterfield-st., for use as people's college. Est. cost, £15,340.—T.C. seek loan of £14,980 for three classrooms at Morley sec. sch. site.

Ripon.—T.C. to start this year with the building of 279 houses on the Lead-la. site. Plans by City E.

Rochdale.—B.C. to invite tenders for 18 bungalows at Dale-st.

Scarborough.—T.C. to sell large site at Northway to M.O.W. for erection of new government offices.

Sheffield.—Millspaugh, Ltd., seek permission to reconstruct Hadfields site, Hecla Works.

Stafford.—T.C. on August 26 gave formal approval to preliminary drawings and sketch designs of a proposed civic centre, which is estimated to cost, exclusive of furnishings, £290,238. An early stage of the scheme, estimated at £69,054, is a self-contained unit to house the Boro' Engineer and the Water Engineer. The architect is Mr. C. Cowles-Voysey, F.R.I.B.A., 2, Bunkers-hill, N.W.11.

Stalybridge.—B.C. to approve provisional layout for Ridge Hill estate and Copley site (architects, Howard & Benson, 88, Mosley-st., Manchester).

Thirsk.—R.D.C. is to build 100 houses on the Flatts.

Todmorden.—B.C. approved type plans for second portion of Harley Wood estate.

Wellingborough.—P.C. Council of St. Barnabas seek further licence for rebuilding of Church.

Whitchurch.—U.D.C. to prepare plans for 30 houses to complete Sedgeford estate.

Whitehaven.—Cumberland C.C. propose fire stn. and 10 firemen's houses at £46,000.

Workington.—B.C. approved plans for new shop at Northside, Workington, for Workington Beehive Co-op. Society, Ltd. (architect, J. Saul, National Provincial Bank-chbrs., John-st., Workington).—B.C. approved layout for 286 houses at Westfield estate.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government Departments*.

Ashton-under-Lyne.—24 "3B" type houses at Gambrel-gr., for B.C.: *James Ridyard & Sons, Ltd., Ashton, £35,300; 160 houses at Taunton estate, scheme No. 2: *Geo. Wimpey & Co., Ltd., London, £236,000.

Blackrod.—34 houses at Half Acre-la. estate, for U.D.C.: *W. Lionel Gray, Ltd., Farnworth, £42,312.

Boldon (Co. Durham).—36 houses for U.D.C: *W. D. and R. Allison, of Whitburn.

Bracknell.—Adaptation of Binfield Park for use as home for mentally backward children. C. D. Andrews (F.), architect to the North West Metropolitan Regional Hospital Board. Quantity surveyors, Young and Brown. *J. M. Jones & Sons, Ltd., Maidenhead, £22,046.

Brighouse.—Houses at Rastrick (Field-la.) site:—30 two-bedroom: *Rowland Lumb & Co., £37,050; 12 two-bedroom: *Lister Brook & Co., Ltd., £14,780 (both subject to Ministry approval).

Burnley.—Houses at New Palace House estate, for B.C.: *G. Wimpey & Co., Ltd. London (90); 12 houses and four flats: *Bleasdale Bros. Ltd. Liverpool.

Cheadle (Staffs).—Further 22 houses at Cheddleton, for R.D.C.: *W. Brammer & Sons, Ltd., £28,080.

Cheltenham.—Works for T.C.:—36 Cornish unit houses at Arle and Hesters Way estate: *Selleck Nicholls & Co., £43,047; 50 Cornish unit houses at Elmfield estate: *Selleck Nicholls & Co., £61,693; 32 Managerial houses for the Foreign Office at "The Knapp" estate: *A. C. Billings & Sons, Ltd., £97,197 (subject to Ministry approval); four flats at Dunalley-parade: *J. H. Storey, Ltd., £4,158; 12 flats at Lynworth Farm estate: *Holland & Witney, £17,932.

Clowne.—Works for R.D.C.:—10 bungalows and six blocks of cottage flats at Creswell: *Craggs Building Co., Ltd., King-st., Cresswell, £12,009 and £25,272; six blocks of cottage flats at Clowne: *V. Lerigo, Dinnington, £25,039; six blocks of cottage flats at Whitwell: *E. A. & H. A. Tomlinson, Beighton, £24,837.

Colwyn Bay.—22 houses at Voryn-ave., Old Colwyn, for T.C.: *Ashworth Bros., Penrhyn, Rhos-on-Sea, £31,872.

Consett.—Construction of 36 houses at Moorside estate, scheme 5, for U.D.C. J. Eltringham, architect, Derwent-st., Blackhill: *C.T.C. (Builders), Ltd., Queen's-rd., Blackhill, Co. Durham.

Coventry.—Houses for T.C. at Bell Green Neighbourhood Unit. 120 flats, 32 dwellings and 31 dwellings: *Coventry & District Association Building Trade Employers, £183,952; £45,920; £40,566; five blocks of flatlets at Tile Hill Neighbourhood unit: *T. W. Bayfield & Son, 3, Duncroft-ave.; six shops and six flats at Charter-ave.: *J. G. Gray, George Eliot-rd. (in lieu of previous tenders).

Dalton-in-Furness.—44 houses at Greystone estate, for U.D.C.: *C. Townson, Dalton-in-Furness, £59,319.

Eastbourne.—Erection of 18 houses on Chatfield-Davis estate, Hampden-park, section 35, for B.C. R. Williams, B.Sc., A.M.I.C.E., B.S., 2, Saffrons-rd.: *A. J. Bessant, Ltd., Grove-rd., Eastbourne, £21,891.

Edinburgh.—Nurses' Home at The Hospital of the Royal Victoria and Associated Hospital Boards. Reid and Forbes, F.R.I.B.A., architects, 17, Great Stuart-st., Westend, Edinburgh: *John Smart, Ltd.

Flint.—Construction of Richard Gwyn Secondary School. Architects, Patrick and M. White and F. C. Roberts (A.), Granville House, Arundel-st., Strand, London, W.C.2. Quantity surveyors, G. C. A. Chattin, F.I.Q.S., 3, Arundel-st., London, W.C.2, and Sherwin and Axtell, F.R.I.C.S., 8, Buckingham Palace-gdns., Westminster, S.W.1: *A. N. Coles (Contractors), Ltd., Sutton-rd., Plymouth, £133,943.

Gateshead.—18 "Orlit" houses at Saltwell-rd., for T.C. Chief A., H. J. Cook: *Tarslag, Ltd., Bowesfield-la., Stockton-on-Tees.

Gateshead.—58 houses at The Cedars and 211 on Wrekenton neighbourhood unit: *J. C. Clark & Son, Gregson-ter., New Seaham.

Glasgow.—Prim. sch. at Site 6 on Balarnock Housing estate. John MacNab, F.R.I.B.A., architect, 129, Bath-st., Blythswood, Glasgow, W.C.2: *The Bristol Aeroplane Co. (Housing), Ltd., Weston-super-Mare, £11,350.

Greenock.—12 houses on Lyle-rd. and Newton-st. sites: *James Laird & Son, The Glebe Contracting Works, Laird-st., Greenock (architects and principal contractors).

Greenock.—22 houses at Hillend-dr. Housing site, Crawfurdsburn, for corpn. Robert L. Rankine, A.M.T.P.I., A.M.Inst.C.E., architect, Master of Works Office, Wallace-sq., Greenock: *Blackburn (Dumbarton), Ltd., Dumbarton.

Hartlepool.—32 houses for T.C. J. H. Wood, Borough-bldgs., Hartlepool. B.E.: *Rennie & Sons, Regent-sq., Hartlepool, £42,811.

Hyde.—Houses for B.C. at Cheetham Fold estate:—One block of type U.T.7: *Vessey Bros., Ltd., Marple; one block each of H.B.3, B1; four U.H.6; six U.T.6; and two U.T.7: *W. H. Matthews, Ltd., Sale; two houses at Bluebell-cl.: *Vessey Bros., Ltd., Marple; two blocks of four U.H.5 at Harbour Farm estate: *Dean & Whipp, Ltd., Hyde.

Leyburn.—Erection of six old people's dwellings and three houses, for R.D.C. N. Dent, A., Finkle-st.-chbrs., Richmond: J. H. Thistlethwaite & Sons, Leyburn, Yorks, £10,747: *C. Chapleo & Sons, Grove Sawmills, Leyburn, Yorks, £10,631.

¶London (Air Ministry).—Contracts to value of £500 or over for week ended August 30:—

Building work: J. H. Metcalf Bros., Doncaster, Yorks; J. M. Jones & Sons (Builders), Ltd., Maidenhead, Berks. *Dismantling and re-erection work*: Farrans, Ltd., Dunmurry, Belfast, N. Ireland. *General maintenance works*: Wm. T. Nicholls, Ltd., Gloucester.

¶London (M.o.W.).—Contracts placed by M.o.W. for week ending August 23:—

London: St. James's Palace, Friary Court, rebuilding of M.o.W. offices and extension to apartment 25, Y. J. Lowell & Son, Ltd., 6, Bathurst-st., W.2; Bradley's Buildings, Bayswater, W.2, adaptations, Harry Neal, Ltd., 117, Baker-st., W.1; Somerset House, W.C.2, external painting, C. & T. Painters, Ltd., Mordaunt-rd., Harlesden, N.10; Ministry of Supply Government Trades Training Centre, Kidbrooke, alterations and additions, J. Garrett & Son, Ltd., Cathles-rd., Balham Hill, S.W.12; Brompton Cemetery (North Lodge), repairs rebuilding and painting, W. & M. Negus, Ltd., Station Works, King James-st., Southwark, S.E.1. *Beds*: Biggleswade M.o.W. Store, London-rd., insulation of roofs and walls of Marston sheds, The Tentest Fibre Board Co., Ltd., 75, Crescent West, Hadley Wood, Barnet, Herts. *Berks*: Broadmoor Institution, Crowthorne, external painting, Ernie Bayliss, Ltd., St. Stephen's House, Westminster, London, S.W.1; M/Supply, Grazeley Green Hostel, Burghfield, internal painting, George Jones & Son (Contractors), Ltd., 27b, Kensington Church-st., London, W.8. *Ches.*: Post Office Sorting Office, Chester, extension, Robert Williams & Sons, Oulton pl., Chester. *Glam*: I.R.O./M.N.I. Park Hostel, Pontypridd, adaptation, W. T. Nicholls, Ltd., 105, Cathedral-rd., Cardiff. *Herts*: Royston M.o.W. Stores, Orchard-rd., insulation of roofs and walls of Marston sheds, The Tentest Fibre Board Co., Ltd., 75, Crescent West, Hadley Wood, Barnet, Herts. *Kent*: Ditton Laboratory D.S.I..R., East Malling, Kent, extensions and alterations to main block for new engine room, J. A. Davison & Son, High-st., West Malling, Kent; police Training College, Sandgate, new sports field, J. T. Machley & Co., Ltd., Harbour-chbrs., Shoreham-by-Sea. *Lancs*: P.O.T.M.O., 15-25, Church-st., Manchester, recovering roofs, floors, general repairs and strengthening main staircase, Dean & Wipp, Ltd., Clarendon-rd., Hyde, Cheshire; M/Health, Moss Side Hospital, Maghull, external and internal decorations, Woolfall and Rimmer, Ltd., 71, London-st., Southport, Lancs. *Merionethshire*: A.E.C., Rhydyglafais Farm, near Corwen, manager's bungalow office and laboratory building, A. E. Davies & Sons (Builders), Ltd., 53, Court-rd., Wrexham. *Renfrewshire*: R.O.F., Bishopton, repairs to roofs of 23 buildings, George Wimpey & Co., Ltd., Hammersmith, London, W.6. *Somersetshire*: T.O.B., Warminster-rd., Bath, alterations and internal decorations to Block A, G. Manning & Sons, 1-2, Wood-st., Bath. *Warwickshire*: N.S.H.C. Overslade Hostel, Bilton-rd., Rugby, internal decorations, G. E. and W. Wincott, Ltd., 64, Coton-rd., Nuneaton, Warwickshire. *Worcs*: Stourbridge, extensions of telephone exchange, A. H. Guest, Ltd., Stourbridge. *Yorks*: H.O., Lawnswood, Leeds, storage office building, W. J. Simms Sons and Cook, Ltd., Haydn-rd., Sherwood, Notts.

Longbenton.—For additions to the Ministry of Works hostel: *W. Jackson, 5, Audley-rd., South Gosforth, Newcastle-on-Tyne.

Millom.—10 houses for R.D.C.: *S. Sheldon & Sons, Millom, £1,528 each.

Musselburgh.—36 houses, etc., for corpn. William Y. Drysdale, F.R.I.B.A., architect, Master of Works Office, Musselburgh. Phillips, Knox and Arthur,

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F.S.I., quantity surveyors, Manse-pl., Edinburgh: *John Best (Contractors), Ltd., Edinburgh, £61,062.

Newcastle-on-Tyne.—Four houses at Warwick Hall-rd.: *J. T. Bell & Sons, 7, Northumberland-pl., Newcastle-on-Tyne.

New Mills.—Erection of 13 bungalows on the Highfield housing estate, for U.D.C. John A. Pearson, S., Town Hall: *W. Taylor & Son, Low Leighton, New Mills, £11,564.

Shardlow.—12 houses and 14 houses at Littleover, for R.D.C.: *Morley Builders, Ltd., Exeter-st., Derby, £15,100 and £17,480.

Skegness.—Erection of 20 houses at Sundial estate, Tarran-way West, for U.D.C. R. H. Jenkins, M.I.Mun.E., Town Hall:—

John Porter & Son, Skegness	£30,902
W. Greetham & Son, Skegness	29,295
Skegness U.D.C. (Direct Labour Section) ...	28,263
*H. H. Adkins, Boston	27,320

Stalybridge.—Eight flats at Oakwood estate, for B.C.: *W. G. West, Ltd., 11, Gt. Underbank, Stockport, £8,711; 13 houses at Hague Steps site: *W. G. West, Ltd., £17,388.

Stockport.—Houses for B.C.:—28 at Nelstrop-rd.: *Poole & Foster, Ltd., Manchester; 22 at Houldsworth estate: *W. Farley & Co., Ltd., £29,511. Houses at Brinnington estate: *J. Foulkes & Son, £54,091 (38); *H. Owen & Son, Ltd., £50,302 (35); *Poole & Foster, Ltd., Manchester, £38,229 (28); *H. S. Doran, Ltd., £35,239 (26 at Canal Bridge Farm estate). (All of Stockport.)

Stockport.—B.C. propose 11 shops and 10 maisonettes at Brinnington estate. Architects, W. Dobson, Chapman & Partners, Macclesfield: *Dean & Whipp, Ltd., Hyde, £30,150.

Swadlincote.—Erection of 50 houses on Hartshorne estate, for U.D.C. J. W. May, M.I.Mun.E., E. & S. Quantities by Gleeds, Quantity Surveyors, Derby: *F. Perks & Son, Ltd., Long Eaton, Nottingham.

Swinton and Pendlebury.—110 houses at Clifton estate, for U.D.C.: *Direct Labour, £135,328.

Wellingborough.—50 houses at Kingsway, for U.D.C.: *Drabble Construction Co., Ltd., College-st., Rushden, £68,155.

West Hartlepool.—Further 22 houses at Owton Manor, for T.C. A. G. Sinclair, Boro' A.: *T. M. Stonehouse, Ltd., Osborne-rd., West Hartlepool.

West Hartlepool.—Additions and adaptations to post office: *W. Pearson & Son, Stranton, West Hartlepool.

Wigan.—Erection of retail fruit market and wholesale fruit stores at Market Hall, for T.C.: *Naylor & Walkden, Ltd., Adlington, nr. Wigan, £31,024.

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